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Investigation of crop
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Washington

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INVESTIGATION OF CROP INSURANCE

HEARINGS

BEFORE A

**SELECT COMMITTEE ON
INVESTIGATION OF CROP INSURANCE
UNITED STATES SENATE**

SIXTY-SEVENTH CONGRESS

FOURTH SESSION

PURSUANT TO

S. Res. 341 and S. Res. 413

PROVIDING FOR AN INVESTIGATION OF THE SUBJECT
OF CROP INSURANCE

APRIL 24, 25, 26, AND 27, 1923

PART 1

Printed for the use of the
Select Committee on Investigation of Crop Insurance



WASHINGTON
GOVERNMENT PRINTING OFFICE
1923

SELECT COMMITTEE ON INVESTIGATION OF CROP INSURANCE.

CHARLES L. McNARY, Oregon, *Chairman*.

HENRY W. KEYES, New Hampshire.*

ELLISON D. SMITH, South Carolina.

II

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III

INVESTIGATION OF CROP INSURANCE.

TUESDAY, APRIL 24, 1923.

UNITED STATES SENATE,
SELECT COMMITTEE ON CROP INSURANCE,
Washington, D. C.

The select committee met, pursuant to call, at 11 o'clock a. m. in room 324, Senate Office Building, Senator Charles L. McNary presiding.

Present: Senators McNary (chairman) and Keyes.

The CHAIRMAN. The committee will please be in order.

The United States Senate, on the 9th day of September, 1922, passed the following resolution, a copy of which will be placed in the record.

(The resolution referred to is here printed in full in the record, as follows:)

Resolved, That a committee, to be composed of three Senators appointed by the President of the Senate, is authorized and directed to investigate the subject of crop insurance, particularly with reference to (1) the kinds and costs of insurance now obtainable; (2) the adequacy of the protection afforded by such insurance; (3) the desirability of any practical methods for extending the scope of such insurance; and (4) the availability and sufficiency of statistics necessary to properly and safely issue additional crop insurance. Within six months after the adoption of this resolution the committee shall report to Congress the results of its investigations, together with its recommendations, if any, upon the most practical and efficient methods whereby the farmer can obtain, at a reasonable cost, adequate and safe crop insurance.

"Such committee is authorized to hold hearings at such times and places as it may deem advisable, to send for persons and papers, to administer oaths, and to employ stenographers to report such hearings at a cost not exceeding \$1.25 per printed page, to be paid from the contingent expenses of the Senate."

And on January 23, 1923, the following amendment was adopted by the Senate:
Resolved, That the time for making report required of the committee appointed under Senate Resolution 341, agreed to September 9, 1922, is hereby extended to January 1, 1924."

Subsequently the Vice President appointed the committee consisting of the Senator from Oregon, Mr. McNary; the Senator from New Hampshire, Mr. Keyes; and the Senator from South Carolina, Mr. Smith. Early in the present month the committee agreed that hearings should commence to-day, and have called a number of witnesses to appear and by their oral statements assist the committee in its work.

The chairman believes it important to state at the outset that the committee does not purpose to project the Federal Government into the business of writing crop insurance, a field of risk little known to insurance experts or companies doing an insurance business. Our efforts shall be directed toward a study of the hazards incident to this form of needed insurance with a view of collecting useful data and determining upon the feasibility of insurance of this character.

For my own part, I believe the Department of Agriculture, through its various agencies which penetrate into most of the counties of the various States, can assist in the gathering of useful data and statistics which may justify private and mutual insurance companies selling crop insurance upon reasonable terms to the producers of the country, thereby assisting materially in the stabilization of agricultural production and credit.

From every viewpoint I believe a step should be taken along the line of investigation, and every fact collected will be a step toward the working out of a problem which will be some day solved to the advantage of a more stable and secure agricultural investment.

At the outset I want to say it is not the purpose of the committee to go into this subject for the purpose of starting up a governmental bureau to enter the field of insurance. But we do wish to make as thorough an investigation of the subject as is possible.

With that preliminary statement I want to say we are happy to have the Secretary of Agriculture, Mr. Wallace, here to-day, and the committee will be very pleased to have a statement from him on the subject of crop insurance, with such observations as he may care to make.

STATEMENT OF HON. HENRY C. WALLACE, SECRETARY OF AGRICULTURE.

Secretary WALLACE. Mr. Chairman and members of the committee, as you know, I have just returned—on yesterday morning—from a six weeks' absence in the southwestern corner of the United States, looking over our department's work and visiting agricultural colleges and experiment stations, as well as meeting stockmen and farmers. I have not had time to prepare any extended statement on this subject which you have under investigation. However, I have some notes here, very hastily prepared, and of course I am very glad to do as you requested, Mr. Chairman—come before you at the opening meeting and make a preliminary statement.

The CHAIRMAN. And the committee, of course, is very glad to have you.

Secretary WALLACE. The Department of Agriculture, as you may know, has been studying this subject of farm insurance of various kinds for some time. We have issued several bulletins on the subject. I do not know whether you have taken the time to read any of the bulletins or not.

The CHAIRMAN. Yes; I have seen them, Mr. Secretary. I wish to say that they are very interesting.

Secretary WALLACE. I suspect that in these bulletins and in our other data you will probably find a sort of basic information on which to begin your investigations.

The CHAIRMAN. We have thought that would be so.

Secretary WALLACE. As I understand the resolutions creating this select committee your investigations shall cover three or four different points, namely:

- (1) The kinds and costs of insurance now obtainable.
- (2) The adequacy of the protection afforded by such insurance.
- (3) The desirability of and practical methods for extending the scope of such insurance.
- (4) The availability and sufficiency of statistics necessary to properly and safely issue additional crop insurance.

So far as crops are concerned, about the only form of insurance available to the farmer has been protection against hail. Hail insurance in some form has been written in the United States since about 1880, but no great amount of it until in the nineties, or from 1895 on, at which date it began to increase more rapidly. In 1900 our estimates indicate there were perhaps \$20,000,000 of hail insurance written. During the first 10 years of the present century there was a gradual increase in the amount of hail insurance written until, in 1915, it is estimated the total amounted to approximately \$180,000,000.

The CHAIRMAN. Do you know the proportion written by mutual-insurance companies and old-line companies, Mr. Secretary?

Secretary WALLACE. I have that data here in the form of a chart.

The CHAIRMAN. We will be very glad to have it.

Secretary WALLACE. In 1919 the volume grew to about \$560,000,000, the highest point yet reached.

I wish to say, Mr. Chairman and gentlemen of the committee, that the first hail insurance was written by a mutual company—

The CHAIRMAN (interposing). Mr. Secretary, may I ask you at this point a question along that line?

Secretary WALLACE. Certainly.

The CHAIRMAN. Has there been a decline since 1919 in the amount of crop insurance written, or are you without available statistics on the subject?

Secretary WALLACE. I think there has been a decline, but I will give you an analysis of the matter if you want it.

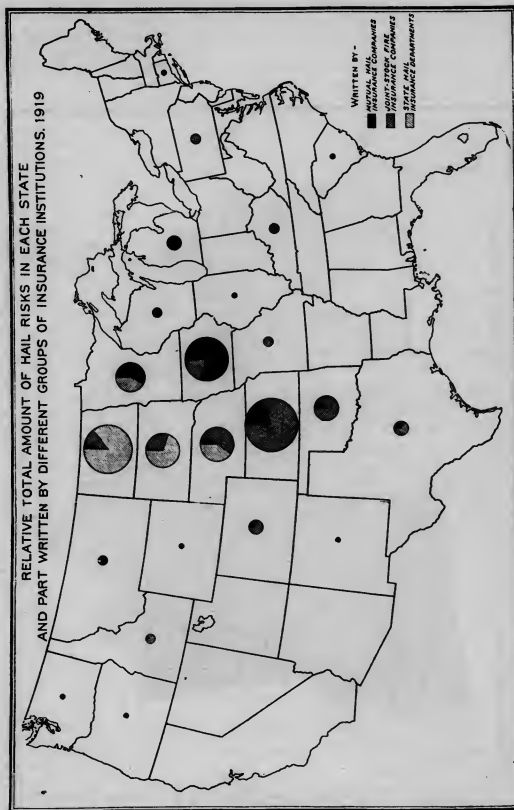
The CHAIRMAN. We will be very glad to have any information on the subject which you will be kind enough to give.

Secretary WALLACE. The first hail insurance in the United States was written by a mutual company, but within a relatively few years a joint-stock fire insurance company entered that field. In 1911 North Dakota put into effect its first State hail insurance law. In the year 1919, which, as already stated, marks the highest point yet reached in amount of hail insurance in force, about one-half of the total risks was carried by 43 joint-stock fire insurance companies, one-fourth of the total was carried by 41 mutual hail insurance companies, and the other fourth of these risks was carried by State hail insurance departments in North Dakota, South Dakota, Nebraska, and Montana.

The distribution of this insurance territorially, as well as among the three groups or classes of insurance agencies just mentioned, may be seen from a chart which I now show you and which has been identified by being marked "Exhibit 1."

The CHAIRMAN. I wish you would hand that chart to the reporter when you are through with it, Mr. Secretary, and I will now ask the reporter to have it inserted in the record.

(The chart referred to, identified by being marked "Exhibit 1," and also by the words "Relative total amount of hail risks in each State and part written by different groups of insurance institutions, 1919," is here reproduced in the record.)



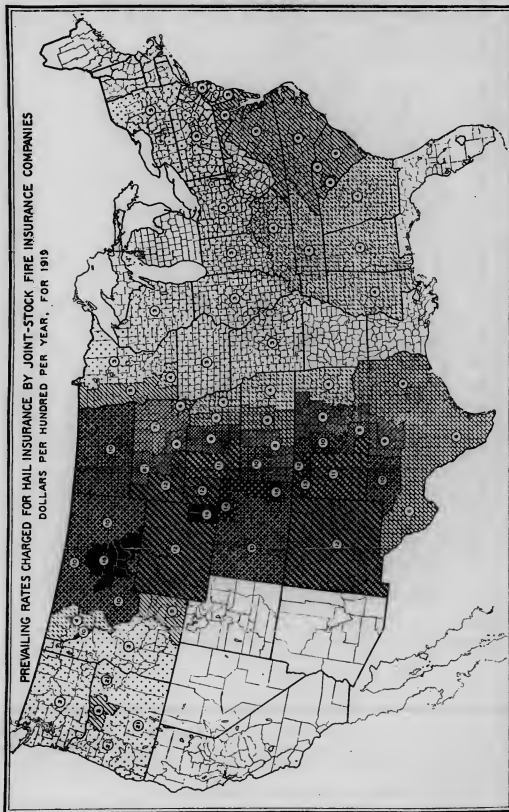
Secretary WALLACE. You gentlemen will note the legend, which indicates that the black portions refer to mutual hail insurance companies, and the checkered portions refer to joint-stock fire insurance companies, and the crosslines refer to State hail insurance departments.

The CHAIRMAN. Have you anything on the rates charged?

Secretary WALLACE. I was just coming to that. The rates charged for hail insurance in 1919, according to a study made by the department early in 1920, varied from 3 per cent to 16 per cent. These rates are indicated on another chart, which I show you and which is identified by being marked "Exhibit 2."

The CHAIRMAN. I also wish that chart reproduced in the record and, Mr. Secretary, will ask you to furnish it to the reporter when you have finished.

(The chart referred to and identified by being marked "Exhibit 2" and also by the words "Prevailing rates charged for hail insurance by joint-stock fire-insurance companies, dollars per hundred per year, for 1919," is here reproduced in the record as follows:)



Secretary WALLACE. An inspection of this chart will show you how rates vary according to sections. The total hail-insurance premiums collected in 1919 amounted to approximately \$30,000,000.

As between the different classes or groups of insurance agencies offering hail protection, the mutual companies as a rule offer rates from one-fourth to one-third lower than the joint-stock insurance companies. A few of the mutuals operate on an assessment basis without specified rates, levying their assessments in the fall after losses have been adjusted.

Many mutual companies have in the past attempted to operate on inadequate rates, making it necessary for them on a number of occasions to reduce or pro rate their losses among the members instead of paying losses in full. Others among these companies have excellent records.

The State of North Dakota in its first hail insurance law provided that assessments for hail insurance could not exceed 20 cents per acre for \$8 of insurance. This represented a maximum premium of only 2½ per cent, or one-fourth of the prevailing old-line rates in that State. Quite naturally the State found itself unable to pay losses in full from the assessments thus collected. The law has later been revised, and the hail insurance of the State of North Dakota, as well as that of the other States mentioned, is believed to be conducted on a fairly sound basis.

The State of South Dakota, which inaugurated a State hail insurance program in 1919, has from the first operated on a fixed rate basis which averages for each of the four districts into which the State is divided a little over one-half of the old-line rates. This State during the past four years paid its hail losses in full in spite of two relatively severe hail seasons, and in addition has built up a material surplus.

Oklahoma also has a State hail insurance law, but no efforts have apparently been made to write hail insurance on the part of the State insurance department, and only a negligible amount of such coverage has been applied for and written.

A relatively complete summary of the hail insurance business up to and including 1919 may be found in Department Bulletin No. 912, United States Department of Agriculture—which bulletin also contains reproductions of the maps or charts already mentioned.

The CHAIRMAN. If you have properly and sufficiently identified the bulletin anyone referring to our proceedings will be able to call for such bulletin and get the information desired. Inasmuch as it is a public document of the Government we will not reproduce it here in our hearings.

Secretary WALLACE. It is possible you may want to reproduce some of the charts.

The CHAIRMAN. We will look over it and if there is any special thing in the bulletin we think ought to be reproduced in our record we will take care of it. The reporter may find it in at the end of the day's proceedings for the purpose of reference, but the Government Printing Office will not reproduce it.

Secretary WALLACE. With reference to general crop insurance, covering all the more important hazards, that was first attempted in the two Dakotas and in Montana in 1917, three different companies writing such insurance. According to such figures as are at hand, the total risks written probably exceeded \$10,000,000.

The CHAIRMAN. Pardon me there, Mr. Secretary. You say that included all hazards to which crops are subjected?

Secretary WALLACE. Well, now, I do not know that it includes all of them.

The CHAIRMAN. The principal hazards, we will say.

Secretary WALLACE. Yes.

The CHAIRMAN. Have you the classifications?

Secretary WALLACE. I will say, principal hazards. I can get that information for you if you wish it, Mr. Chairman, but it probably will be brought out in these hearings. There are a great many hazards to crops. For instance, take the matter of insect damage—

The CHAIRMAN (interposing). I think in some reports of your department you have named the major classification as 10?

Secretary WALLACE. We can give you that information in as great detail as you may want, I think.

The CHAIRMAN. We will be very glad to have it.

Secretary WALLACE. The rate charged on the business written in the two Dakotas and Montana in 1917, aggregating in risks probably \$10,000,000, was about 10 per cent. The amount of insurance per acre was \$7 in the case of at least two of the companies, probably three. The policy in effect guaranteed the farmer crops to the value of this amount per acre with the crops valued at a price stipulated in the contracts.

We had a severe drought in North Dakota and in Montana during 1917, and the companies which offered this form of insurance failed to pay their losses. Two of these companies were organized on the joint-stock plan and one of them was a mutual.

Among the reasons given for their failure to make good these losses was the statement that the risks were written by careless agents of the companies after severe damage from drought had already occurred.

Since 1917 I think no general crop insurance was written until 1920, when one of the larger joint-stock fire insurance companies again offered a crop insurance policy, and wrote a considerable volume of business. The policy offered by this company differed in a number of respects from that offered by companies in the Northwest in 1917. In effect it guaranteed a fixed income per acre without regard to market price. In other words, the company assumed the hazards involved in price fluctuation as well as in crop failure.

Because of the heavy drop in price this company, according to reports, also lost heavily on its first attempt at this form of coverage.

Since 1920, the company offering crop insurance, namely, the Hartford Fire Insurance Co., of Hartford, Conn., has continued in a conservative way to write a limited amount of crop insurance, while one other company, namely, the Home Insurance Co. of New York, has also written a limited amount of such insurance. As the committee will no doubt hear from representatives of these companies, it seems unnecessary to go into details with reference to the business done by them.

On the general subject of crop insurance, of course you will be going into extensive hearings, but I assume that behind the resolution the thought was that if it were possible to devise some way by which the farmer can be relieved in part of the hazards of weather, over which he has no control, that would be desirable, without considering just how it should be done.

And, unquestionably, it would be desirable. Farming is a business of peculiar hazards. The farmer has no control over the most of his raw material—that is, sunshine and rain—either as to when it comes, or as to the quantity which comes. And he has no control over torrential storms unaccompanied by hail and which may lay his crops flat, or accompanied by hail which may beat his crops to pieces, or of any of the other hazards resulting from weather.

If it were practicable to find some way to relieve the farmer of these hazards from which he can not protect himself, and distribute the risk, not necessarily over the entire community but over all farmers producing a given crop; if some equitable way could be found to do that, certainly it would be desirable.

Take the case of the younger farmers especially. Here is a young man starting out for himself. Often he starts as a renter, and his equipment is represented by his machinery and his horses and a sow or two, perhaps, and a few cows. I am speaking now of the diversified farming country in the Central West. These are the results of his savings as a hired man. If the season is normal and prices are fairly normal, he begins to get ahead. But he may be entirely wiped out by a hailstorm, or by a severe drought, even though in the case of a drought or a hailstorm hitting him the farmers in general may be prosperous that year. Certainly it would be to the advantage of the community at large if some way could be devised so that such a farmer would have a normal chance.

And what I say with regard to the young man starting out as a farmer applies with exactly the same force to the men who are already started but who have not gotten in that position financially which enables them to stand the loss, which has enabled them to accumulate a reserve to carry them over such unfortunate years.

You spoke, Mr. Chairman, of the suggestions which had been made concerning the Government going into insurance of some sort along this line. I agree with you. I have not thought, at least not now, that a governmental agency should be set up to carry on a crop insurance business. Theoretically if all corn farmers, for example, or all wheat farmers, wherever they might be, could be brought into an association; if through Government action, or through the activity of private associations organized for that purpose, something might be done so that you would get the widest possible distribution of the risk, you would then be able to get the cheapest form of insurance and the most effective.

I think a company would have difficulty in carrying on crop insurance if it were confined to a single State. The ideal plan, it seems to me, would be to take in a very substantial reach, perhaps covering several States. In that way you could distribute not only the losses from drought but the benefits that sometimes come from drought by reason of the fact that if a crop is reduced it does not mean that a man always loses. In the case of corn, if there is a drought, and a reduced crop, sometimes it really means a profit instead of a loss. If those who make a profit could be brought in to bear, through insurance premiums, a part of the losses to those who do lose, it would help not only the farmers but the consuming public.

Mr. Chairman and gentlemen of the committee, we have in the Department of Agriculture a mass of material which will be available to the committee. We have data

on climatic conditions in all parts of the country, covering rainfall, temperature, wind, date of last killing frost in the spring, first killing frost in the fall, etc. We also have data on the amount of crop damage from the more important hazards in all parts of the country. These crop-damage records now cover a period of more than 10 years.

We have a record of crop yields for a long period of years for all parts of the country. These data are supplemented as well as checked up every 10 years by the census reports.

We have actual soil surveys of about one-third of the counties in the United States. The department also is in close touch with the localization and the spread of plant diseases and insect pests.

If it is your intention to make a comprehensive report on all the things which must be considered in connection with crop insurance, then I suspect all the information I have mentioned will be of some value to you. From the material now in our files I think we can give you information on almost every subject it could be conceivable would have a bearing on this general question, and that we will be very glad to do.

The CHAIRMAN. We thank you, Mr. Secretary. I know you have a mass of useful data, and we shall be glad to avail ourselves of it. While in the time at our command we will attempt to make an exhaustive study of this subject, yet you realize we can only go so far, not only on account of the limited time but owing to the limited data that has heretofore been collected. Have you any general idea of how we should approach the legislative features of an investigation of this character? Or what means would you suggest as the way to collect data on these losses and what might affect premium rates on contracts of insurance?

Secretary WALLACE. I assume that, first, you would want to make a very complete report on hail insurance as the one form of crop insurance that has been in use over 40 years. I think it would be very helpful if you would make a complete investigation of what has actually happened in the matter of hail insurance. Then as to crop insurance, I do not know that you can do much else besides get the experience of the few companies that have written a general coverage and then to make a study of it, which would be more or less theoretical.

The CHAIRMAN. This question has been considered by the chairman and perhaps by other members of the committee, and I have discussed it with those who are interested in the subject generally: Considering the Department of Agriculture, and out of about 2,700 counties in the several States you have county agents in about 2,250 of them. I am speaking now only from memory.

Secretary WALLACE. Yes, sir.

The CHAIRMAN. The county agent is interested in the agricultural welfare of the county over which he administers affairs incident to his employment. I think the county agents in cooperation with various organizations, such as the Farmers' Union and Grange and the Farm Bureau, and other accredited institutions, like boards of trade, could perhaps collect in these counties or units thereof the losses that occur from year to year from various causes—drought, excessive moisture, hail, pests, and what not—which information would be of inestimable value in the future in determining a practical form of insurance of this character, and also furnish a yardstick to determine the charge to be made by way of premium in order to safely issue such insurance. I offer that to you for such observations as you may like to make.

Secretary WALLACE. I think we have got now the most of that data, not through the county agents perhaps, but through our crop reporters. We have a very extensive crop-reporting system, which goes not only down to the county unit but in many cases to the township unit.

The CHAIRMAN. Does the crop-reporting system cover losses from natural weather hazards?

Secretary WALLACE. Perhaps not in the way you have in mind, but it does include losses from all causes.

The CHAIRMAN. Assuming, by way of illustration, does your department have data showing, possibly, what the loss might be in the far western portion of the country, in Oregon and Washington, from want of pollenization or from frosts?

Secretary WALLACE. No; but we have a general statement of crop yields for any particular year.

The CHAIRMAN. You think, then, if you take the yield over a period of years you could determine in a general way the loss sustained by a crop on account of unfavorable weather conditions?

Secretary WALLACE. I think so.

The CHAIRMAN. Without studying the elements?

Secretary WALLACE. An insurance company would need to study each element. But I think as a basis for your investigations we can furnish you with information now for varying periods, according to the crop, back for 30 or 40 years—that is, I

think we can give you a basis on which to start your report from data already in our office.

The CHAIRMAN. Coming eastward, we will take the State of Kansas, and we will take the whole State as a unit. Have you statistics that would supply a mutual insurance company, or an old-line insurance company, or anyone, for that matter, who desired to sell insurance, the true hazards and the losses sustained by corn or wheat from various causes during the last 10 or 15 years?

Secretary WALLACE. I think so. Kansas happens to be, as you probably know, a State where a great deal of attention has been paid to crop statistics. In addition to the work we do they have had a very good State department of agriculture.

The CHAIRMAN. Do I get your mental attitude to be this, that you think insurance should be distributed over a wide area and should cover all the elements, or the major elements at least, that constitute crop losses; or would you go into the Corn Belt, or into the Wheat Belt, or into the Cotton Belt, and confine it to one particular crop?

Secretary WALLACE. Well, I think I would confine it to the major crops. Take corn, and our record shows an average yield to be greater in the States known as the Corn Belt proper—that is, the seven Corn Belt States. We have the data down by counties even. Southern Minnesota has a certain average yield per acre over a period of years; Iowa also, and Kansas, and Missouri. Not infrequently you may have a drought in the Corn Belt States, especially in Kansas, Nebraska, Missouri, and Iowa. When you have such a drought, I think it operates as though you were moving the State of Iowa north for 50 or 100 miles, so that southern Minnesota very frequently gets a good corn crop at the same time. The effect of the drought in these States is very often to increase the value of the total corn crop of the States producing corn, even though it not infrequently ruins an individual farmer. If you start on the basis that the average corn crop is so much in Missouri and so much in Kansas, and devise a form of insurance that will insure that average crop under carefully worked-out rules and regulations, you will then have distributed the hazard of drought over the entire Corn Belt States, and any workable plan that will do that will be a desirable plan.

The CHAIRMAN. Do you think the Department of Agriculture has data sufficient to guide a mutual insurance company, or any kind of company, in selling contracts of insurance of that character?

Secretary WALLACE. I think you have sufficient data to begin with. I would not say we have data that would continue to be basic data for that purpose, because, naturally, as you gather experience there will be some modifications. But I think we have sufficient data to begin with.

The CHAIRMAN. Has there been agitation among the corn growers for an opportunity to cover their losses by insurance?

Secretary WALLACE. I do not know that there has been what you might call agitation. But I think farmers have long recognized the need in some way of distributing the weather hazard. But there has been no widespread agitation in the sense in which we ordinarily use that word.

The CHAIRMAN. You have given us a good illustration as to corn. Would that same rule apply to wheat and cotton?

Secretary WALLACE. Yes, it seems to me it would. In the case of wheat perhaps you would have to take that crop separately, as you would in the case of corn if you undertook to cover the whole corn crop.

The CHAIRMAN. Would it be practical to mix wheat, corn, and cotton and other agricultural commodities in considering them from the standpoint of insurance protection?

Secretary WALLACE. I hesitate to express an opinion on that. As I explained to you, I have not given thought to this whole question to a sufficient extent to give a detailed expression of opinion. I am now only speaking in very general terms, as you know.

The CHAIRMAN. I appreciate that, Mr. Secretary.

Secretary WALLACE. I would be very glad to make available to the committee not only the statistical information that is in the Department of Agriculture at this time, but the services of one or more of our people who have given long study to this general question. Mr. Valgren, whom I think you know and who is with me to-day, is an exceptionally well informed man on this subject, and would be of considerable help to you in carrying on any line of investigation which you may determine to carry out. I will be very glad to make his services available to you.

The CHAIRMAN. I thank you, Mr. Secretary, and we shall be glad to avail ourselves of his valuable services.

Secretary WALLACE. I only want to say I have no hard and fast plan in my mind. I am exactly in the attitude that you are in this matter.

The CHAIRMAN. I know, Mr. Secretary, and you have been very helpful to the committee, and we appreciate your presence here very much indeed.

Is Mr. Doyle, of the Hartford Fire Insurance Co., present to-day?

Mr. DOYLE. Yes, sir.

The CHAIRMAN. Would you like to return to-day?

Mr. DOYLE. No, sir; we are here at the pleasure of the committee, at least so far as this week is concerned.

The CHAIRMAN. I would like to put Mr. Valgren, of the Department of Agriculture, on the stand at this time, so as to have the benefit of the departmental view.

Mr. DOYLE. That will be very satisfactory to us.

The CHAIRMAN. I will now call Mr. Valgren.

STATEMENT OF MR. V. N. VALGREN, IN CHARGE OF DIVISION OF AGRICULTURAL FINANCE, DEPARTMENT OF AGRICULTURE.

The CHAIRMAN. As I understand, Mr. Valgren has given very deep study to this subject from the standpoint of an expert of the Government, and the committee would be very glad to have him contribute such information as he would like in order to assist the committee. I shall not suggest how he should proceed, but will ask him to make a statement.

Mr. VALGREN. Mr. Chairman and gentlemen of the committee, I come here without any manuscript or fixed plan of presentation. I did not know in just what order I would come, or what topics would be covered by the time I was called on; nor did I know what the committee would be most interested in.

The Secretary of Agriculture has given you a general review of the situation of crop insurance as it has developed. I would like personally to make a brief statement, which might be called the case for crop insurance. I realize that there is another side which might be emphasized, and which probably will be emphasized, but we all realize that each year there are billions of dollars invested in farm crops, in the form of accumulated capital and in the form of labor, by the farmers. This investment you might say is made in crop prospects rather than in actual crops. The thing depends very largely upon the weather, as was stressed in Secretary Wallace's statement.

Because of this large investment each year in mere prospects, farmers have been referred to by several persons, when they criticized other groups or classes as being gamblers, as themselves the greatest gamblers in the world. I have seen that statement on several occasions.

Now, the farmer is not a gambler in any true sense of the word. That term, it seems to me, is properly applied to one who takes unnecessary chances, chances created just for the sake of having a chance. The farmer's business is a fundamental and necessary business, and the risks involved are incidental to that business and inseparable from it. So that while the farmer, in my opinion, is a big risk taker he is not a gambler in the proper use of that word.

Insurance is at the present time available to business men in general for nearly all important risks, with the exception of the producer of crops. It is not necessary to enumerate the several kinds of insurance available. You gentlemen know that a man can get fire insurance and windstorm insurance and sprinkler-leakage insurance, and plate-glass insurance, and all the various forms of casualty insurance. And the careful business man very generally protects himself against a very large percentage of the hazards that surround him.

As I see it, the farmer is the only one that has had little or no protection offered him against the very great hazards he assumes in the production of crops.

The first insurance, as we know, was marine insurance. It was essentially weather insurance. And I can think of practically no other business that resembles the old form of "trading at sea," as it was called, than does the production of crops. The transformation of the farmer's prospects into tangible wealth is dependent upon the weather much to the same extent as trading at sea was dependent upon the weather for the success of the enterprise. And the hazards of the farmer are not limited to weather hazards. In addition to drought, excessive moisture, windstorms, and various other weather hazards, the farmer is up against insect and animal pests and plant diseases.

As stated by the Secretary of Agriculture a few minutes ago, protection against the hazards involved in producing crops is particularly needed by the new or beginning farmer, who invests his accumulated capital in a crop and in addition is obliged to obtain credit in order to supplement his accumulated capital. The farmer, who oftentimes has his all staked in a single season's crop, would find crop insurance a great advantage; a blessing, as I see it.

I would like to say a word as to the nature of the insurance that the farmer needs. He needs insurance not against crop damage as such, but against crop damage so severe as to result in serious financial loss to him. There is a distinction which, in my opinion, should be kept in mind between crop damage and financial loss, which is often overlooked by those speaking about crop insurance. Assume, for instance, that a farmer invests in his crop an amount of capital and labor which at current prices is equivalent to 16 bushels of wheat per acre. The crops develop, and he has in prospect, say, 32 bushels to the acre. Then comes along one of these untoward weather conditions maybe, and reduces his prospect, say, by 25 per cent. That farmer harvests 24 bushels of crop to the acre on a field where he has invested the equivalent of 16 bushels to the acre. He therefore enjoys a profit instead of suffering a loss in spite of the crop damage that occurred.

Hail insurance, rather unfortunately, in my opinion, covers that kind of loss. When you buy hail insurance you buy protection against hail damage as such without special regard to financial loss suffered.

The CHAIRMAN. You do not think that is an insurable quantity, then?

Mr. VALGREN. I think it is a quantity which the farmer does not need to have covered by insurance, and protection on which costs him more than it is worth.

The CHAIRMAN. I understand your point. He has a prospective investment there, however.

Mr. VALGREN. Yes, sir.

The CHAIRMAN. A prospective profit. I will say.

Mr. VALGREN. Yes, sir.

The CHAIRMAN. But if he reaps enough to cover the cost of labor and seed and meet the investment on the farm, and meet insurance and taxes, you think he has incurred no actual loss.

Mr. VALGREN. No loss that he needs to insure against.

The CHAIRMAN. While he has not incurred an actual loss in property, he has incurred an actual loss in the way of decreased acreage production or income in that year.

Mr. VALGREN. He has suffered a diminution in prospective income, I admit.

The CHAIRMAN. But you do not think that an element that should be considered in the matter of writing crop insurance.

Mr. VALGREN. That is an element which I personally would not buy insurance against if I were farming. I would not pay the rate necessary to cover such a loss. I hold to the position that any risk which a man can carry himself, without taking the chance of being seriously crippled, can not wisely be insured against. I say that because no insurance can possibly be given by anybody without a certain amount of loading on the premiums intended to cover expenses of operation. And if you carry that risk yourself, you certainly save that element in the insurance premium which it is necessary to charge in order to conduct the business, and which we generally call the loading.

On the other hand, if this same farmer we have referred to, who invested the equivalent of 16 bushels of wheat per acre, should suffer a crop damage which would bring his total yield down to eight bushels per acre, and thereby is compelled to work for nothing for that year, and possibly to lose some of his accumulated capital if not all of it, then he is in a position where he very much needs indemnity against loss.

The CHAIRMAN. Then, your contract of insurance in all cases would cover actual loss incurred by the producer.

Mr. VALGREN. Yes, sir.

The CHAIRMAN. And that would decrease the premium charge, is your idea?

Mr. VALGREN. Yes, sir, very greatly.

Mr. VALGREN. I might say that the crop insurance which has hitherto been offered has been built upon that basis of guaranteeing only the investment, or I think it could be said a substantial part of the investment, rather than the total prospects. What I refer to now is crop insurance, not hail insurance.

Hail insurance has always been written and is still written in the form of a valued policy, and if you should lose one-fourth of the prospective yield, were that prospective yield large or small, you would get one-fourth of your indemnity guaranteed in the policy. So that the farmer I just used in my illustration, who invested 16 bushels per acre, and had prospects of 32 bushels to the acre yield, should he lose one-fourth of it and thereby reduce his yield to 24 bushels to the acre, he would collect one-fourth of his hail insurance indemnity in addition to reaping the profit represented by his actual harvest.

I have no moral point to make against that form of insurance, but am trying to make the point that it covers more than is necessary in so far as the hail hazard is concerned.

On the other hand, hail insurance covers less than is necessary in so far as general crop hazards are concerned. A man may buy hail insurance and then lose his crop, or suffer very severe damage thereto by reason of drought or other hazard. In that case, if he does not lose his crop by reason of hail, why of course he is paid no indemnity on his hail insurance policy, but his hail insurance premiums are added to his losses.

At the same time I have no desire to argue against the purchase of hail insurance in territory where the hail hazard is severe. I am simply trying to point out that hail insurance does not fill the farmers' real requirement. He has need for general crop insurance.

The CHAIRMAN. You mean it does not furnish him ample opportunity to cover his losses?

Mr. VALGREN. No, sir; it does not.

The CHAIRMAN. But you approve of hail insurance so far as it goes, and the plan that has been used makes it a very good insurance?

Mr. VALGREN. I am not sure I would care to go that far. I think hail insurance as now written may well be worth the cost to many farmers, but it is not written on a plan which gives the greatest protection for the cost, because it covers loss of prospects as well as loss of actual investment. And the premium, of course, is in proportion to the indemnity guaranteed. In other words, hail insurance as it is now written is more expensive than it need be in order to give the farmer reasonable protection against the hail hazard.

The CHAIRMAN. What is the distribution of territory in respect to these hail contracts? Is it confined to narrow limits, or does it go over vast communities or indeed many States?

Mr. VALGREN. Do you mean the companies writing that form of insurance?

The CHAIRMAN. Yes.

Mr. VALGREN. The joint-stock fire insurance companies, which, as stated by the Secretary of Agriculture, write about half, or at any rate in 1919, when I gathered some data on the subject, did write half of the total of the hail insurance issued in the United States, operate as a rule in a large number of States, in 8 or 10 States, and some of them in perhaps 30 or more States, nearly over the entire country. We have some States in the South where hail insurance has not been written because there is such a slight hail hazard. The most of the mutual companies limit themselves to a single State. We have three or four mutual hail insurance companies that write in two or three or half a dozen States.

The CHAIRMAN. Are those mutual companies as a rule prospering?

Mr. VALGREN. Do you mean the mutuals or joint-stock companies, or both?

The CHAIRMAN. I want the whole subject discussed.

Mr. VALGREN. Well, there will probably be other men who can give you more definite information on that subject than I can, at least so far as joint-stock companies are concerned. However, from such information as I have found I should say that they have made a reasonable profit on hail insurance; that is, the joint-stock fire insurance companies who write hail insurance as one of their side lines, you might say. Those profits have not been as large as many people imagine, however. In Department Bulletin No. 912, furnished you by the Secretary, on page 27, you will find a diagram which, by two lines for each year, indicate the approximate amount of hail insurance premiums collected by joint-stock insurance companies and mutual companies.

The CHAIRMAN. Can't you give those figures to the reporter so they will appear in our record?

Mr. VALGREN. I can do that if you care to take the time.

The CHAIRMAN. We do not want to put a published document into the record. But if you refer to any of these figures that may easily be included I would rather have them stated.

Mr. VALGREN. I do not have that data here.

The CHAIRMAN. You may put that in later.

Premiums received and losses paid on hail business in the United States by joint-stock fire insurance companies, 1890-1922.

Year.	Premiums.	Losses.	Year.	Premiums.	Losses.
1890.....	\$34,096	\$20,894	1908.....	\$893,260	\$748,046
1891.....	90,845	49,451	1909.....	995,410	647,906
1892.....	145,575	29,194	1910.....	735,696	260,288
1893.....	91,194	67,656	1911.....	945,446	417,793
1894.....	44,594	10,498	1912.....	1,640,044	995,680
1895.....	64,671	22,695	1913.....	1,772,775	695,619
1896.....	83,925	79,429	1914.....	3,213,235	1,662,684
1897.....	171,020	71,553	1915.....	6,395,009	8,235,958
1898.....	334,831	124,394	1916.....	8,185,388	7,565,468
1899.....	235,615	239,050	1917.....	8,002,617	4,212,363
1900.....	176,348	80,546	1918.....	12,854,309	7,770,571
1901.....	270,719	138,469	1919.....	19,459,838	7,984,783
1902.....	307,040	262,315	1920.....	16,909,570	9,754,609
1903.....	536,535	385,915	1921.....	12,700,530	8,732,261
1904.....	387,453	384,708	1922.....	9,120,328	7,055,010
1905.....	761,697	530,768			
1906.....	531,648	142,291		108,768,151	69,710,297
1907.....	335,890	367,772			

¹ Figures for last three years are taken from the National Underwriter for March 15, 1923 (special hail insurance number). Earlier figures are taken from State insurance reports supplemented by data obtained direct from the insurance companies.

Mr. VALGREN. The figures I might say indicate a reasonable profit has been made by the joint-stock insurance companies writing this form of coverage, but not a very large profit.

The CHAIRMAN. Is insurance of that character diminishing or increasing in number of policies and amount of insurance written?

Mr. VALGREN. The insurance written by the larger group of hail insurance companies, namely, the joint-stock insurance companies, has decreased very materially since 1919.

The CHAIRMAN. What reason do you assign for that?

Mr. VALGREN. Well, I think probably the main reason is that the farmers have been hard hit by the relatively low prices for farm products, and have felt themselves unable to buy this kind of protection which they bought very liberally in 1918 and 1919, when prices for farm products were good and the farmers had a very good income.

The CHAIRMAN. Speaking in average terms of premium charge and losses covered by these hail contracts, what do they amount to?

Mr. VALGREN. It is pretty hard to get at an average. The premium on hail insurance varies from 3 per cent to 15 per cent or 16 per cent. Personally, I should say, as a guess, that the average would not be far from 6 per cent. There is a relatively small amount written at above 10 per cent.

The CHAIRMAN. Is that percentage of the prospective crop or the total loss carried in the policy of insurance?

Mr. VALGREN. That is percentage of the face of the policy, the amount guaranteed the insured in case of total loss.

The CHAIRMAN. What is the estimate of total loss based upon?

Mr. VALGREN. Do you mean the face of the policy?

The CHAIRMAN. Yes; do they insure for the full prospective amount or the average annual yield, or three-fourths or one-half? I would like for you to go ahead and explain this whole subject.

Mr. VALGREN. In the matter of hail insurance they have paid relatively little attention to the amount of insurance carried. They have given the farmer essentially all the protection he wanted to pay for against that hazard. Many of the companies have limited the amount they would themselves write to, say, \$10 an acre on ordinary crops, or \$12 an acre. But they have not objected to the man taking a corresponding amount of insurance from one or more other companies. So that he could get, if he so desired, \$30 or \$40 hail insurance. In case of loss he would collect a certain percentage of his indemnity from each of the companies carrying the risk. In other words, the farmer has been offered an opportunity if he so desired to gamble in hail insurance.

The CHAIRMAN. He could not collect all that his insurance called for from all of the companies, could he?

Mr. VALGREN. In case of a total loss he would collect the full amount of insurance specified in the policies from each of the companies, even though that amounted to \$40 and his crop without damage was worth \$5 or \$10 an acre.

That is what I referred to awhile ago when I said it was a valued policy. The crop for insurance purposes is valued at whatever figure the policy provides. It has little reference to the true value of the crop. Settlement is made on a percentage basis. If half of the crop is gone the insured collects half of the face value of his policy or policies.

In the last few years I believe companies have taken the position that they did not want a farmer to gamble in hail insurance, and have prevented him from taking more than a certain amount of so-called concurrent insurance. That is to say, one company will write a policy for \$12 an acre, and they will give a person the right to take out an additional policy for \$12 an acre, but no more, from some other company.

The CHAIRMAN. The matter is not clear to me yet on this proposition. What amount of insurance can the average farmer take in North Dakota or in Kansas or in Minnesota on an acre of wheat? Is it based on what he thinks the yield will be per acre or what it has been over a certain period of years, and is it on the full amount of the loss or only a portion of it; and is it based on the value of wheat on the market?

Mr. VALGREN. It has no fixed relation to the value of the crop. A company writing hail insurance may, if it so chooses, set an arbitrary limit on what a farmer can take on his crop, but it has been open to farmers to buy a large amount of hail insurance than the value of their crops.

The CHAIRMAN. Has not there been a study of the subject so far in order to determine in what States or localities there have been the greatest losses?

Mr. VALGREN. Yes.

The CHAIRMAN. And are premiums based on that information?

Mr. VALGREN. Yes; and premiums vary all the way from 3 per cent to 15 or more per cent.

The CHAIRMAN. Then you would say that hail insurance is a practical method of covering crop hazards so far as hail is concerned, and there is very little more to do in the way of making a further study of the risk?

Mr. VALGREN. It is a practical method as to the hail hazard.

The CHAIRMAN. There are various other causes that damage crops, some of a greater consequence than hail. Why is it contracts of insurance have been practically restricted to damage from hail and not tried out from other standpoint?

Mr. VALGREN. I do not know that I could give a very satisfactory answer to that question. My personal opinion is that the hail losses or damages are very spectacular, and nearly every farmer has seen some other farmer's crop, if not his own, ruined from this cause. That makes him open to salesmanship on that question, and a man offering hail insurance will find a relatively ready listener. Furthermore, damage from hail can to a large extent at least be distinguished from damage from other causes, and that makes it practical for an insurance company to insure against this specific hazard and eliminate all other hazards.

The CHAIRMAN. At what stage of maturity do hailstorms usually occur?

Mr. VALGREN. Storms of course may occur at any time during the summer. Susceptibility to severe damage increases as the crops approach maturity.

The CHAIRMAN. Hailstorms do not occur during the wintertime or early spring, of course?

Mr. VALGREN. No.

The CHAIRMAN. Does it happen that a hailstorm will come after wheat reaches head?

Mr. VALGREN. It may happen before wheat gets into the head. A hailstorm causes greater damage when the crop is nearer maturity. If it occurs just as the wheat is about ripe the straw is brittle, and a hailstone will do greater damage, to a greater number of straws under such circumstances. In the earlier period of the crop it sometimes appears that the damage is more severe than it really is; a young crop may more or less recover from such damage.

The CHAIRMAN. Regarding an interesting article you wrote in October, 1922, to the Journal of Insurance and Financial Statistics. In that article you give the total crop damage from all causes as about 28 per cent.

Mr. VALGREN. Yes, sir.

The CHAIRMAN. Then you classify the causes.

Mr. VALGREN. Yes.

The CHAIRMAN. This is based upon a study from 1909 to 1918, inclusive, a period of 10 years.

Mr. VALGREN. Yes.

The CHAIRMAN. You have among the causes: Deficient moisture, 12 per cent of the 28 per cent; excessive moisture, 2 per cent; flood, 0.33 per cent; frost, 0.07 per cent; hail, 1 per cent; hot winds, 2 per cent; storms, 0.26 per cent. Therefore it would seem that damage by excessive moisture is twelve times that of hail, and from hot wind twice that of hail.

Mr. VALGREN. Yes, sir.

The CHAIRMAN. In your opinion is it practical for an insurance contract to cover all these various causes, or any of them over and above the element of hail you have discussed?

Mr. VALGREN. Well, if you were going to cover all the hazards to the same extent that the hail hazard is covered in a hail insurance contract, the premium would become prohibitive. That is one reason why I find some fault with the hail insurance coverage—that it covers prospects of profits as well as investment.

The CHAIRMAN. Well, then, do I understand you: Take 10 causes of damage, a policy covering these 10 major causes of damage would bring the premium so high that the farmer could not pay it?

Mr. VALGREN. Yes.

The CHAIRMAN. Would you take one of the causes separately then?

Mr. VALGREN. No.

The CHAIRMAN. Or would you combine two or more, or would you take a certain region and include those in a single contract?

Mr. VALGREN. I would cover all hazards in a single policy, but I would cover damage from those hazards only when it was so severe that it brought the yield harvested below, and I should say materially below, the investment in the crop. That would eliminate a very large percentage of these crop damages covered by the figures you have just mentioned.

The CHAIRMAN. But if you get the basis of actual loss on investment worked out, you would include all of the major causes of damage, I understand?

Mr. VALGREN. I would include all causes of damage which are entirely beyond the farmer's control.

The CHAIRMAN. You would not include all causes of damage or loss which usually occur in a community? Take in the South, for instance, and consider cotton, as to damage from hail, or possibly deficient moisture, would you include things of that kind?

Mr. VALGREN. I see no reason why they should not be included, because if that hazard is very small, then of course it would enter into the premium calculation in a similarly small way.

The CHAIRMAN. I guess you are right. Has there been any insurance issued, other than covering loss by hail, by old-line companies or mutual organizations?

Mr. VALGREN. Yes; as has already been stated before this committee, there were three companies that wrote general crop insurance in certain States of the Middle West in 1917, and with very adverse experience to the companies.

The CHAIRMAN. What kind of companies were they?

Mr. VALGREN. Two of those companies were joint-stock fire insurance companies, and one was a mutual fire insurance company which undertook to write this form of coverage. In 1920 this plan, somewhat modified, was revived by the Hartford Fire Insurance Co., and in the following year I believe—1921—a certain amount of insurance on essentially the same plan was also written by the Home Insurance Co. of New York.

The CHAIRMAN. What were the results to them?

Mr. VALGREN. I am not thoroughly posted on the actual experience of these companies. The figures, so far as I know, showing their premiums and their losses have not been published separately from the premiums and losses on other risks written by the companies mentioned. From such information and reports as come to me, however, the companies have lost money on this form of insurance.

The CHAIRMAN. Do you think the various factors that enter into the destruction or damage to crops should be independently studied as affecting various communities or districts in the country; or can you base it all upon the average yield over a period of years, and from that make a deduction sufficient to form a basis for an insurance contract?

Mr. VALGREN. I am not entirely clear on that myself.

The CHAIRMAN. I would like for you to discuss it anyway. It is a very important subject.

Mr. VALGREN. Yes; I realize that it is. It seems to me that while these causes of crop damage can be studied separately, that the combined net effect of all of them appears in the actual crop yield, and that if you were to give me, for instance, for a given territory the actual crop harvested each year for 10 or 20 years, I would be in a position to give you a reasonable rate for a guaranty of an average yield; or, say, three-fourths of an average yield for that same territory. I would say from those figures you could tell how frequently and to what extent the yield had fallen below the average. It seems to me the most significant data as a basis for crop insurance premiums or rates is really the actual yield on a given farm over a long series of years.

The CHAIRMAN. Are statistics of that kind being collected by the Department of Agriculture?

Mr. VALGREN. To a certain extent.

The CHAIRMAN. I want to know how fully the work has been done, over what range of time it has extended, and how far you propose to go forward with it in the future.

Mr. VALGREN. I do not feel that the Department of Agriculture has sufficient information of the type I have just mentioned, namely, yield, to work out satisfactory rates for all parts of the country at the present time. But local surveys are being made in selected areas each year, and they get their yield as far back as they can as well as the yield of the current year. Furthermore, the experiment stations operated more or less jointly between the United States Department of Agriculture and the State agricultural colleges, have accurate records on the experimental farms for the length of time these experiment stations have been in existence. Unfortunately, of course, they are too few and far between to provide information that would be a sound basis for rates for all parts of all States.

The CHAIRMAN. You would not say that your department has collected facts sufficient to justify insurance companies to accept them as a basis for a contract of insurance of this kind, would you?

Mr. VALGREN. Well, I think they would need to supplement that data through other sources.

The CHAIRMAN. Is the Department of Agriculture prepared to go ahead in the next few years and gather yield statistics and the losses from various causes, and amplify the work and make it more complete and accurate?

Mr. VALGREN. I am not in a very good position to answer that question. My own work has not been connected with crop reporting. But I think more information is being gathered every year than was gathered the year before, and in that way the records are being amplified and extended. Damage from specified hazards to specified crops is available for all parts of the country. These data now extend over 12 or 13 years. It does not cover orchard crops, only the 10 leading field or farm crops are covered by these reports. At the present time they are not in such shape to make them highly usable, because they have been summarized only by geographic districts, and they should be summarized by States and by divisions of States. But that could be done with a reasonable amount of clerical help.

The CHAIRMAN. Would you suggest that legislation be enacted providing additional funds if needed and giving further authority to the Secretary of Agriculture to use the means at his disposal in collecting such data?

Mr. VALGREN. Well, I do not know whether additional funds are needed or not. So far as data regarding damage from specified causes to specified crops are concerned, I think they may possibly be worked up by the crop reporting division in a reasonable time. Of course there are periods when they have to carry a peak load, and then there are other times when the load is not quite so heavy, and at such times they take up tabulating and computing work not required by any given date. I think it is the plan, as soon as they can get to it, to work up this crop damage data. It may be necessary to provide some additional help to work this up, but as to that I am not definitely advised.

The CHAIRMAN. Have you noticed any disposition on the part of mutual insurance companies in the wheat States where damage to crops occurs, or of any other insurance companies, for that matter, to broaden the field of insurance?

Mr. VALGREN. I know of no serious attempts on the part of mutual insurance companies to go into the general crop-insurance line. One Michigan company spoke of it last year, according to a notice in a newspaper. I communicated with the secretary of the company, and he said they had been thinking of it, but that they would not do it this year, and he did not know when if ever they would undertake it.

The CHAIRMAN. If the farmer, wherever his place of activity may be, could acquire general crop insurance based upon actual loss as detailed by you, wouldn't that add largely to his ability to acquire intermediate credits to carry on his farming work?

Mr. VALGREN. I think there is no doubt that it would improve his credit situation very materially.

The CHAIRMAN. Do you think insurance of that kind is practical, and do you give it as your opinion that some day policies of that kind will be issued?

Mr. VALGREN. Yes; that is my opinion. I believe that joint stock insurance companies now writing it will probably continue, and that other insurance companies will take up this form of coverage, although the rather disastrous experience that met the first attempt at writing crop insurance has for a time discouraged that line of work. I think, however, those adverse experiences were due to a lack of knowledge of the problem tackled, not only with special reference to the physical hazards, but with regard to what might be called the moral hazards involved. Of course the

farmer himself can not bring about disaster to his crop from drought or any of these other causes. But, in the first place, an insurance company writing this form of insurance as I see it is confronted with the problem of very adverse selections of the insured. That is, the farmers who farm worse than the average in their community, and who may be inclined to take advantage of any and every loophole that may be found in the insurance contract, will be the most readily sold on a proposition of this kind. A company has to learn to guard itself against these new problems involved in general crop insurance and which are not involved in hail insurance or in the other forms of insurance now written.

One reason assigned for the heavy losses suffered by the three pioneers in the field of crop insurance, particularly in North Dakota and Montana in 1917, was the fact that those companies permitted banks who had not in general written insurance for them to write this form of coverage. They said: Here is a very simple proposition, and anybody can write this insurance for us. The banks were very closely tied up with the farmers, and when the drought came on in the summer of 1917 the farmers who had heard of this insurance wanted it, and wanted it badly, and the bankers wanted them to have it, and they wrote the insurance. I am reliably informed that some of this insurance at least was written after the crop was practically gone. There are no doubt many forms of moral hazard connected with this kind of insurance that a company must learn to guard itself against.

The CHAIRMAN. I have an interesting letter from Denny & Co., fruits and produce, 167 South Water Street, Chicago. I hope a representative of that firm will be here this week. But briefly referring to the matter we have been discussing, they say they have recently assumed the risk on a thousand acres of potatoes grown in the south. It is a very interesting contract, and I only refer to it now by reason of the fact that it goes way beyond the risk from hail and the rate is set forth in the letter. This is evidence that the field of insurance is being extended apparently as rapidly as information at hand will justify. I do hope that if nothing else comes out of these hearings that Congress may at least create new agencies for speeding up the collection of very essential data to justify the sale of crop insurance, because the risks must be ascertained before a rate can be fixed.

Senator Keyes, do you wish to ask Mr. Valgren any questions?

Senator KEYES. I believe not.

Mr. VALGREN. I have one other suggestion to make, Mr. Chairman.

The CHAIRMAN. The committee will be very glad to hear it.

Mr. VALGREN. This is more or less speculation. One of the serious problems any agency writing this form of insurance will be up against is what I referred to a minute ago as the moral hazards, the human element, the inclination of certain people to take unfair advantage of the insurance contract, and to collect indemnity when indemnity is not due. I have been told, for instance, that one farmer who carried crop insurance and was in effect guaranteed a certain yield per acre, reported a loss after harvest, and it was found that he had sold a part of his cotton at a point somewhat distant from his usual market place. He reported as his income and yield that obtained and sold in his market place.

It seems to me it will be difficult to guard against all of the various forms of moral hazard without the cooperation of the community in which the crop insurance is written. If some plan could be devised, and I have no reference here to the form of the agency, whether joint stock, or mutual, or state; but if some plan could be devised by which there would be a committee, say, in each community or county, responsible to a central agency, for the adjusting of losses; and if there could be provided in the charter or by-laws of the central agency that after a certain period of years of actual experience in this form of insurance the rates would be progressively adjusted to an experience basis, it might lead to a community of interest that would be desirable in guarding against the moral hazard.

For example, if the insurance plan provided that for the first five years certain rates should prevail in the county, and in other counties of course other rates, such rates being fixed upon a basis of the best information we now have; and after five years an adjustment of rates should be made toward an experience basis, I think it would be advisable. For instance, the rate in force for the first five years in that county would in the sixth year be increased or decreased by a certain fraction of the difference between that rate and the average annual cost per \$100 of insurance based on the five-year experience in the county. The next year another step would be taken toward an experience basis. And possibly after 10 years the rates in that county would be the rates established simply by the average cost of giving that insurance in that county. Then the local committee, or whatever body of management you had in the county, would know that if they permitted any one graft on the company, or obtain indemnities that were not really due, in the long run such evil practices

would come back to roost on themselves and their neighbors in that county in the form of higher rates. Counties that held down their insurance costs on the other hand would enjoy relatively lower rates. That is merely a suggestion.

Senator KEYES. Why do you fix a period of five years?

Mr. VALGREN. I have no particular reason. It is merely an arbitrary period I fix because you could not take two or three years and get a fair average. I think you would have to have at least five years experience before you had even an approach to an average, and at least 10 years before you had anything like a reliable average.

The CHAIRMAN. Mr. Valgren, before you close, let me ask you: Will you be able to attend the hearings of this committee?

Mr. VALGREN. I shall try to do so.

The CHAIRMAN. We shall be glad to have you do so, as you have given this matter considerable study.

Mr. VALGREN. I will be glad to give you any information I have.

The CHAIRMAN. The committee wants to accommodate those from out of the city as much as possible. For to-day I have quite a long list of witnesses here. Is there anyone present who desires to be heard before we adjourn at 1 o'clock to meet again at 2.30 p. m.? If there is anyone present who desires to get away this afternoon we will hear him.

Mr. Doyle, do any of your witnesses wish to be heard now?

Mr. DOYLE. We are here for information, really, Mr. Chairman, and would prefer to wait.

The CHAIRMAN. We will be glad to hear Mr. Nelson at this time.

STATEMENT OF MR. JACOB NELSON, SUPERINTENDENT OF HAIL DEPARTMENT OF AMERICAN EAGLE FIRE INSURANCE CO., CONTINENTAL FIRE INSURANCE CO., FARMERS' FIRE INSURANCE CO. OF IOWA, AND FIDELITY PHOENIX INSURANCE CO., CHICAGO, ILL.

The CHAIRMAN. Mr. Nelson, do your various companies sell hail insurance?

Mr. NELSON. Yes, sir.

The CHAIRMAN. I do not want to inject so many questions into the record. I wish you would just go ahead and make a statement relative to the subject which we are considering to-day, doing it in your own way.

Mr. NELSON. You are referring particularly to the subject of crop insurance?

The CHAIRMAN. Yes; we are studying crop insurance particularly.

Mr. NELSON. We have had no experience in the writing of that class of insurance, and I would therefore only be able to offer theories on the subject if I attempted to do anything, and certainly I do not want to do that.

The CHAIRMAN. I understand that you write hail insurance.

Mr. NELSON. Yes; we do; but I thought you particularly desired to hear about crop insurance.

The CHAIRMAN. Well, hail is one of the elements that damage crops.

Mr. NELSON. Very well. We have been engaged in writing hail insurance for a number of years, sometimes with disastrous results and sometimes with favorable results.

The hail-insurance contract as at present constituted I believe is fair to all concerned. And the business is sought after by the farmers according to their ability to pay, and I believe adjustments have been satisfactory in all cases, and all losses have been paid in full. I believe it is recognized as one of the standard forms of indemnity.

The CHAIRMAN. Do all of your companies write this form of insurance?

Mr. NELSON. Yes, sir.

The CHAIRMAN. How many years have they been doing it?

Mr. NELSON. The particular companies I am with now have been in the business only four years—1919, 1920, 1921, 1922, and now in the fifth year.

The CHAIRMAN. Where do you sell this insurance?

Mr. NELSON. From Ohio on the east to Oklahoma on the south, and Colorado and Montana and Idaho and eastern Washington and Oregon, and through the three prairie Provinces of Canada.

The CHAIRMAN. Is the same form of contract used in the whole territory mentioned by you?

Mr. NELSON. Yes, sir.

The CHAIRMAN. Has the business been increasing from the time you started five years ago?

Mr. NELSON. We went in at a time when everything was at the peak, when the prices were high and the demand was great. Since that time agricultural and financial conditions have been such that the business has fallen off, not due, however, to any lack of desire on the part of farmers to buy hail insurance. Our volume of business is less now than it was the first year we entered, but for the reason I have mentioned.

The CHAIRMAN. That you think is due to the depression generally existing in agriculture?

Mr. NELSON. Yes, sir.

The CHAIRMAN. During this period of time have your insurance companies found it a profitable field of operation?

Mr. NELSON. Well, we fortunately started after the disastrous years of 1915 and 1916. If you go over a 10-year period I would say the business has not shown a profit to the companies. Last year, 1920, was a very disastrous year. Speaking for my particular companies I will say that our four years' experience has been fair.

The CHAIRMAN. What rate do you charge in the different sections?

Mr. NELSON. We try to make the rate on the merit system, according to the frequency of hailstorms. It varies from 2 per cent for States east of the Mississippi River to a point where, for one county in one State, the rate is 20 per cent, the highest known.

The CHAIRMAN. What is that rate on?

Mr. NELSON. The indemnity mentioned on the face of the policy.

The CHAIRMAN. What regulates that?

Mr. NELSON. That depends largely upon the desire of the insured himself to buy protection, whether a limited amount of insurance a farmer would take in any one company, or a certain amount in a number of companies up to \$24 on dry land or \$36 on irrigated land.

The CHAIRMAN. Without limit as to the yield?

Mr. NELSON. That is the maximum. We have local agents, however, who sell insurance, and we rely upon their judgment. We want it possible for a man who has the possibility of a 40-bushel-to-the-acre crop to get insurance up to the full amount of the crop.

The CHAIRMAN. Of what he represents the crop might be?

Mr. NELSON. Yes, sir; or what it appears it will be.

The CHAIRMAN. You do not pay your insurance upon the actual loss sustained?

Mr. NELSON. We pay our losses on a percentage basis of the amount of the insurance carried.

The CHAIRMAN. You heard Mr. Valgren's discussion here, that he would not take into consideration prospective crops or profit, but would simply calculate the net loss on the investment. That would greatly decrease the charge you would make under your plan, would it not?

Mr. NELSON. I do not think so.

For instance, a man may have a half interest in a crop and he can only insure for \$12 an acre. Or if he has only a third interest in a crop he may only insure for \$8 an acre. However, if, in the judgment of our local agent, the crop is not worth that we want to limit it to the actual investment. We do not want a man to make money out of hail insurance.

The CHAIRMAN. Take a concrete illustration, and your limit is \$24 on dry land, as I understand?

Mr. NELSON. Yes, sir.

The CHAIRMAN. And \$36 an acre on irrigated lands?

Mr. NELSON. Yes, sir.

The CHAIRMAN. A farmer goes to the local agent and takes out a \$24 per acre policy.

Mr. NELSON. If in the judgment of the agent he is entitled to it.

The CHAIRMAN. I appreciate that.

Mr. NELSON. Yes, sir.

The CHAIRMAN. The agent sells him the insurance after exercising great care and judgment.

Mr. NELSON. We hope he is.

The CHAIRMAN. And a hailstorm comes along in June and destroys the insured crop. He will perhaps still produce about 10 bushels to the acre on that land. He will sell the wheat in Minneapolis, assuming he is located in northern Minnesota, and receive \$1.95 a bushel. His net profit would be very small and his actual loss would be very much under the amount insured, yet you would pay him the whole of the \$24 an acre, because on the face of the contract that would be the insured loss.

Mr. NELSON. If I as adjuster should find he has suffered a total loss and he was insured for \$24 an acre he would not have any 8 bushels left.

The CHAIRMAN. I say his prospective yield would be 10 bushels. Then the loss would not be \$24 an acre in any case.

Mr. NELSON. If the loss were absolutely total he would get the total amount of the policy.

The CHAIRMAN. But irrespective of that fact he would not lose \$24 an acre.

Mr. NELSON. No, sir.

The CHAIRMAN. And you have not made any money on that contract?

Mr. NELSON. It has not been very profitable.

The CHAIRMAN. I would not think it would be.

Mr. NELSON. I think you are getting a wrong impression, Mr. Chairman. I am not saying our average amount of insurance is \$24 an acre. I would say it is around \$10 or \$12 an acre, but we make it possible for a farmer to get an average of \$24. Mr. Valgren can take out up to \$40 an acre in a lot of different companies, but we will not permit that, or if it were done we would prorate our payments.

The CHAIRMAN. I may have a misapprehension on the nature of your contract, and we are here for the simple purpose of developing the truth, as you understand?

Mr. NELSON. Yes, sir.

The CHAIRMAN. Your maximum insurance, you say, is \$24 an acre on certain lands. Say, an estimate of production would be \$20 an acre, so then you would pay him the actual loss and not \$24 an acre, is that it?

Mr. NELSON. If it is in a country where the average yield is 8 bushels to the acre, the agent will not sell him an amount of insurance in excess of that.

The CHAIRMAN. I do not want to take into consideration the element of human frailty. What I want to get at is the total loss to your company. If you sell to him on an agent's judgment insurance up to \$24 an acre and the farmer suffers a loss less, do you still pay him the full \$24?

Mr. NELSON. Yes, sir. But we try to exercise care in granting amounts of insurance. Senator Keyes. Will you kindly furnish the committee a copy of your form of contract? I would certainly like to see the form of contract.

Mr. NELSON. Yes. I have none here with me, but will mail you one.

The CHAIRMAN. Has your company found any difference in the number of losses in these various territories you have described?

Mr. NELSON. Oh, yes.

The CHAIRMAN. And still you charge the same price for a risk?

Mr. NELSON. No; our companies do not charge the same price in the different localities. The rates vary according to frequency of hail and other elements that enter into the making of rates. We make our rates on the best experience we can find and on a merit system. We find that the hazard of hail increases as altitude increases. We find, for instance, on the eastern slope of the Rocky Mountains the hazard is a good deal higher, and consequently the rate is a great deal higher.

The CHAIRMAN. You have not sold any other form of crop insurance?

Mr. NELSON. Only hail insurance.

The CHAIRMAN. Do you think that is a practical hazard for an insurance company to carry?

Mr. NELSON. Yes, sir; it is an insurable hazard. The contract is very fair. We have no difficulty in making adjustments under the contract. An adjustment of a loss can be figured out with almost scientific accuracy. If 25 or 100 plants are destroyed, we pay that amount of insurance. We attempt to throw every safeguard that we can around the business, of course.

The CHAIRMAN. You expect to see an increase in the business of hail insurance when agricultural products bring a higher price in the markets?

Mr. NELSON. That is our experience in the past.

The CHAIRMAN. Do any of your companies contemplate an enlargement of this contract to include other risks?

Mr. NELSON. Well, we are in the insurance business. If it is a feasible hazard we will be glad to write other forms of indemnity, perhaps joining other companies in investigating the subject.

The CHAIRMAN. Have your companies made any investigation along other lines of crop insurance?

Mr. NELSON. We have not yet.

The CHAIRMAN. Generally what do you suggest might be done to improve the policy of writing insurance on crops?

Mr. NELSON. Well, I believe that a need exists for some kind of full coverage insurance, but whether or not it is a feasible thing, whether or not a contract could be written that would be salable on which rates could be charged that would be fair to the insured and at the same time return a profit to the company assuming the liability, I do not know. Considerable research and investigation will be required before anyone will be able to answer that question.

The CHAIRMAN. Senator Keyes, any questions?

Senator KEYES. I believe not.

The CHAIRMAN. Is there anything further you wish to say, Mr. Nelson?

Mr. NELSON. No, sir. But I do not want you gentlemen to think I am writing \$24 an acre on all crops in all localities.

The CHAIRMAN. I understand now.

Mr. NELSON. We appoint local agents after considerable investigation. We simply put that figure as the maximum, above which the local agent may not go even if the crop goes to \$50 an acre. Neither can a local agent insure more than their percentage in the crop up to \$24 an acre. A great many farmers will come in and take out \$5 or \$6 an acre of insurance first to protect the actual investment. Then, as the crop stands up and he sees it develop, the farmer will come in and take additional hail insurance.

The CHAIRMAN. Isn't it a general proposition as to fire insurance the insured can only collect the amount of the actual damage?

Mr. NELSON. Yes, sir; that is true in the case of property. But in the case of crops it is problematical. If you were to get two or three farmers in a field and get them to try to estimate the value of the crop you would get different figures.

The CHAIRMAN. You do not think it is proper to get the actual value?

Mr. NELSON. No. If a farmer asks for insurance and the crop deteriorates we will pay him the amount of the insurance he carries. If it increases in value he would still be limited to the amount mentioned in the contract. I mean in each case in case of a loss.

The CHAIRMAN. Do you pay the full value of the crop?

Mr. NELSON. We take the amount of the policy and if it is a total loss we pay without deduction. If it is not a total loss we only pay a percentage of the loss.

The CHAIRMAN. Will you supply the contract or a brief statement concerning its provisions?

Mr. NELSON. Yes; when I get back to the office I will be glad to do that.

The CHAIRMAN. We thank you very much.

The reporter will please include in the record the paper which I now hand him.

(The paper referred to is here copied in full in the record, as follows:)

MOORE HAVEN, FLA., April 11, 1923.

The Moore Haven Farmers and Merchants' Club is an organization formed primarily to promote the interchange of thought and act, tending to uplift and advance farm business and its allied interests.

One of the great needs of the farmer is an equitable low-cost insurance, protecting him in his varied investments made necessary in the full operation of his farm business, in order that this business may be placed on a par with other businesses of like importance.

Therefore, in view of the proposed nonpartisan farm-bloc program, it is advisable to devise a suitable agricultural insurance bill and to introduce the same for passage at the next session of Congress.

Whereas a special subcommittee of the Senate Agricultural Committee, of which Senator McNary, of Oregon, is chairman, propose to begin hearings on crop insurance the last week in April; Therefore be it

Resolved, By this organization, that it is the unanimous sense of this meeting that a suitable crop insurance bill be devised, introduced, and passed, and that it become an effective law is highly desired, and that a copy of this resolution be sent to each Senator and Congressman representing this State at Washington, and ask that the fullest possible support be given to the consideration and passage of the above-styled crop insurance bill.

C. R. WILLIAMS,

Secretary, Moore Haven Farmers and Merchants' Club.

Addressed to Hon. Duncan Fletcher, Washington, D. C.

The CHAIRMAN. The committee will meet at 2:30 o'clock p. m., provided some of those now present desire to go on at that time. May we depend on some of you to appear at that time?

Mr. DOYLE. We can provide some one who will speak to the committee.

The CHAIRMAN. The committee will now stand in recess until 2:30 o'clock p. m. (Whereupon, at 1 o'clock p. m., the committee recessed until 2:30 o'clock p. m.)

AFTERNOON SESSION.

The committee reassembled pursuant to the taking of the noon recess.

The CHAIRMAN. The committee will come to order.

Mr. Doyle has given me the name of Mr. W. J. Otjen.

STATEMENT OF MR. W. J. OTJEN.

The CHAIRMAN. Mr. Otjen, will you give to the reporter your name, your residence, and whom you represent?

Mr. OTJEN. W. J. Otjen. I live at Enid, Okla., and at this time I am general agent of the hail departments for a number of insurance companies, principally the Northwestern Fire & Marine Insurance Co. of Minneapolis.

I have worked in about all lines of that, writing the business, adjusting losses, for the last number of years as general agent handling principally Oklahoma and Texas and also a few other States in connection, Kansas, and New Mexico. I have represented different companies as general agent since about 1912.

The CHAIRMAN. What has been your experience, Mr. Otjen, or what have your companies done in the way of insurance of that kind?

Mr. OTJEN. Well, my experience has been that we had an ascending scale as to volume of business from about 1912 to 1919, then a descending scale to the present time; and the years 1915 and 1916 were extremely bad, the loss ratios ranging nearly 200 per cent of the premiums; and the general experience I have had in that is that we look for these bad years in cycles ranging from five to seven years. There was a question you were discussing this morning that somewhat interested me from the standpoint of my own adjusting. You were discussing a policy affecting the actual value, or a settlement affecting the actual value of the crop.

At the time of these adjustments we sometimes have as many as four or five adjustments on one policy, subsequent losses, and at the time of the adjustment it may range from the time the grain is just a few inches high up until the grain is headed and ready to cut, and while the value of that grain would vary somewhat, it would be awfully hard for an adjuster to say just what that grain was worth. For instance, assuming that the adjuster would think it would make 10 or 12 bushels per acre, the farmer would naturally consider that the production would be much larger, and were they to attempt to fix a future production it would be a very difficult matter on which to agree; but where we take a fixed amount per acre, for instance, \$10 per acre or \$12 per acre, which in my experience is almost the—well, it is the common policy, and nearly all policies range about \$10 to \$12 per acre in my territory. We start from that point; we have that fixed proposition to work from; and we just endeavor to ascertain the percentage of the loss, whether it is a 10 per cent loss or a 20 per cent loss or a 30 per cent loss, or however it happens to be. And in regard to the proposition of overinsurance, the time that I have been writing this there has only been one year—I think that was 1919—when we had very many policies for what we would term "pyramid"—more than one company being on the same crop.

Now, in Texas the grain crops as a rule are not quite as productive as they are farther north, and there the limit per acre is fixed at \$18 per acre maximum on grain and \$24 on cotton.

The CHAIRMAN. The total amount you pay on complete destruction of the crop?

Mr. OTJEN. On a complete destruction that would be the total amount.

The CHAIRMAN. What per cent do you charge on the average in your territory?

Mr. OTJEN. Well, in Oklahoma, it ranges from 2 per cent in the eastern portion of the State, and by that, if you are familiar with the State, I mean it would take in practically 60 per cent of the eastern side of the State, with higher rates in the western end, ranging from the line of the Rock Island Railroad north and south to the western side of the State, and in Texas nearly all of the hail business is written in what is called the Texas Pan Handle, and just south of that, in probably 15 to 20 counties in the State, and there the rates are 4 per cent in those eastern counties and run as high as 13 per cent in what are considered the hazardous western counties. The rates are based on past experience. There are about six counties there that draw the 13 per cent rate.

The CHAIRMAN. Have your companies found hail insurance a profitable line of business?

Mr. OTJEN. Well, based on the entire period that I have been in, they have made what they term a small profit on it. Their profit has evened the loss years they had. I had four companies last year and two of them made a profit and the other two did not.

The CHAIRMAN. You have not attempted to enter the other field of losses?

Mr. OTJEN. Crop insurance?

The CHAIRMAN. Yes.

Mr. OTJEN. No; I have never written any of that. It has been written slightly through that section by some companies, but not very extensively.

The CHAIRMAN. What per cent of the wheat growers carry insurance of this nature?

Mr. OTJEN. Well, in the western end of the States of both Oklahoma and Texas—I am just estimating—but I would say a third to a half.

The CHAIRMAN. Do you cover any agricultural products except wheat?

Mr. OTJEN. Barley, rye, cotton, beans, peas, garden vegetables, fruits.

The CHAIRMAN. I suppose the rate to be charged varies on these different commodities?

Mr. OTJEN. Yes; rye and cotton are higher than wheat. Wheat is what we consider our basic rate and rye is 2 per cent higher and cotton is 2 per cent higher in Oklahoma and 3 per cent higher in Texas.

The CHAIRMAN. How long have you been issuing policies against the losses to cotton by hail?

Mr. OTJEN. Personally about 10 years, but they have been issued prior to that.

The CHAIRMAN. How far does your territory extend into the Cotton Belt?

Mr. OTJEN. Well, the writings of my own office—

The CHAIRMAN (interposing). Your companies?

Mr. OTJEN. Well, I handle all of the company business for Oklahoma and Texas.

The CHAIRMAN. Oh, yes.

Mr. OTJEN. We go about as far south as Fort Stockton, Tex.; or, if you draw a line from El Paso to the east, it goes about as far south as that in Texas.

The CHAIRMAN. Do you know whether any insurance companies are operating farther south and east in the cotton States?

Mr. OTJEN. Well, I do not know. We would write it in any portion of Texas or Oklahoma, but I have not had any offered nor have I obtained any in what is termed the eastern side of Texas or Oklahoma. About all we are writing. They are writing clear over to the eastern side and writing in Arkansas for any that desire it.

The CHAIRMAN. Have you given any thought to the general subject of crop insurance?

Mr. OTJEN. Yes; I was somewhat familiar with the experience that has been told here in 1917.

The CHAIRMAN. Will you not put that into the record in your own way? We would be very glad to hear you discuss that phase of this matter.

Mr. OTJEN. I would like to see a form of crop insurance worked out which could be put on, and the chief difficulty that I have seen in regard to it is that the demand for this crop insurance is in what we term "one crop sections," or the more hazardous section of each of the States in which I operate.

For instance, in Oklahoma, from about the central portion of the State east and west to the east line of the State their crops are reasonably certain because of moisture. I mean there is no drought to speak of, and the only thing they have to fear is insects or hail, neither of which is particularly bad, although insects do bother them once in a series of five years, based on the past few years' experience; but the western portion of the State and also the Texas Pan Handle are frequently affected by drought and, in fact, I should say that about one year in three the crops are very seriously affected by drought, and to cover these crops, where the demand is heaviest for this insurance, would take such a high rate that it would be almost prohibitive for the farmer. In the eastern section of the State it would not take nearly so high a rate, but the demand is proportionately less, and the only way that I could see that that could be worked out would be in addition to working out these statistics, such as were referred to this morning, to also provide for a system of inspection in practically each county of each district, so that the crops as written could be inspected and their condition ascertained at the time of writing.

A tremendous loss could be easily incurred in the writing of that crop insurance, and I think that is what most of the companies have found to be their greatest deterrent in going into it.

The CHAIRMAN. Well, do you mean to leave the impression with the committee that hail is the only risk that might be insured against in all the field of agriculture?

Mr. OTJEN. No; I would not think so. No; I would think—personally I would like to see the other worked out very much, because it would insure a complete form of protection to the farmer, and ultimately I have hopes it will be done, but personally I think that inspection will be necessary as well as the scientific tabulation of the past results.

The CHAIRMAN. Are your companies keeping any data with regard to losses throughout Texas and Oklahoma?

Mr. OTJEN. Yes; in each State.

The CHAIRMAN. Do you find the Government agencies helpful to you in their statistics and reports?

Mr. OTJEN. Well, not with particular reference to hail. I have not seen their statistics with the separate tabulations for the hail at all. They give the general and estimated percentage as to hail.

But, take our own experience, we have experience ranging for 8 or 10 years and with that we know pretty nearly what are considered the bad hail counties and base a rate proportionately on what we can expect in the way of hail based on a series of years. I have not seen any figures put out by the department which refer specifically to hail other than estimates.

The CHAIRMAN. What would you say in regard to the proper means of obtaining the statistics necessary to issue additional crop insurance?

Mr. OTJEN. I do not know how far they run back, but the past few years I think the department has been getting some very complete statistics and the different States are also getting them. In Oklahoma, for instance, the county assessor tabulates the acreage and the Department of Agriculture also prepares data along the line of production and gives the results by counties. Now, I do not know of any other data that would be of much benefit in addition to what they are now getting.

What I consider necessary is that data for a somewhat longer period than I have seen it, and also to work with this personal inspection of the crops than I have referred to.

The CHAIRMAN. Do you think the State, acting in cooperation with the Government through the Department of Agriculture, could collect yield statistics which would be a sound basis for insurance rate making?

Mr. OTJEN. If those experiences were classified. For instance, if those figures showed rather than an estimate the loss from drought, freezing, and the different things like insects, I think it would form a complete basis for it.

The CHAIRMAN. Well, that was not quite an answer. I wonder from the discussion of Mr. Valgren this morning if you want him to make a separate study of the various factors that bring about the losses or would you be satisfied with simply the statistics of the yield over a period of years.

Mr. OTJEN. I would think that the different factors would be important, and that also refers to the personal inspection which I referred to. Take, for instance, in my own locality the corn which is raised is raised principally in river beds or low sections. Well, if this form of insurance were to be put on it would easily be possible to plant the corn promiscuously and ask for the insurance, which would result in a much heavier proportion of loss than prior statistics would indicate as reasonable. That, I think, with a classification of the causes would be of great benefit, because certain proportions of fields which turn out a good production have injuries from certain causes like "ground out" in certain portions of the field; insects work upon a portion; and if a policy of insurance were written on that field the policyholder could claim a portion of the loss based on the part of the field which had suffered damage, while the total production of the field might equal the experience of quite a number of years past. In other words, if you were taking a 10-year period of production, that that year might equal the 10-year average of production, but still the claimant claim a loss on the section of the field that really had not been producing in prior years.

For that reason I think if the different elements were given it would be quite necessary to be considered in fixing such a rate, although, as Mr. Valgren said, the proportionate element would enter. In other words, if drought caused but a very small percentage of loss, that would also, or should also, add a little to the rate in that particular locality.

But what I am referring to and thinking of is the variance in certain fields where certain proportions of them are termed rough land, or subject to overflow, or subject to injury from causes which can be seen, but which, in writing the field in the spring or in the fall, might not be apparent.

The CHAIRMAN. If statistics were gathered by the Government over a sufficient length of time to insure their reliability and response to seasonal conditions, do you think your companies would be interested in extending the scope of their business and assuming other risks than hail?

Mr. OTJEN. Well, I think their inclination is that way. I am not one of the executive officers and so only know from discussions, but I think they would like to put on that form of insurance.

The CHAIRMAN. Are you familiar with the companies that carry general crop insurance?

Mr. OTJEN. Only slightly. I know of those companies.

The CHAIRMAN. You are not familiar with the conduct of their business or the nature of their contracts?

Mr. OTJEN. Well, I saw some of the contracts two years ago, but I believe there are men here who are more familiar with that, who will tell it a lot better than I can, so I will not attempt to go into it.

The CHAIRMAN. Is there anything further, Mr. Otjen?

Mr. OTJEN. No, sir.

The CHAIRMAN. Senator Keyes, have you any questions you would like to ask?

Senator KEYES. I would just like to ask what is your opinion as to the decrease in the amount of insurance in the last two or three years?

Mr. OTJEN. Well, I would base it almost entirely on two causes: The principal one is depreciation in the farm products prices, grain, wheat, which is the principal crop that we write our hail insurance upon, and we wrote our heaviest volume during the high prices of grain, and the amount decreased very sharply as grain went down; and also we have been affected in the past two years by poor crops in certain localities, which has decreased the amount.

Senator KEYES. Then you would think this is simply a temporary diminution and that the chances are there will be further increased insurance, especially if the prices of crops increase?

Mr. OTJEN. Yes; if crop prices went back to what they were I would look to see a much heavier volume of insurance written.

The CHAIRMAN. I thank you, Mr. Otjen, very much.

Mr. L. G. Howell, of Syracuse, N. Y.—is he here?

Mr. HOWELL. Yes, sir.

The CHAIRMAN. Will you come forward, Mr. Howell, please.

STATEMENT OF MR. L. G. HOWELL.

The CHAIRMAN. Will you give the reporter your name, address, occupation, and whom you represent?

Mr. HOWELL. My name is L. G. Howell, of Syracuse, 312 University Block. I am supervisor of the crop division for the Home Insurance Co. of New York, and also as regards hail insurance for the Franklin Fire Insurance Co., Philadelphia.

The CHAIRMAN. You make your own statement, Mr. Howell, if you will. You are familiar with this subject and the committee would be very glad to have your experience and your observations.

Mr. HOWELL. We—meaning by that the company—have had four years' experience in regard to hail insurance through our eastern farm department. The jurisdiction which that department had on hail insurance extended over the States of New York, Pennsylvania, New Jersey, Maryland, and Delaware. This year, in addition to the States named, we also have West Virginia and the New England States. We are issuing four forms of hail policies, for different classes of crops, tobacco, fruit, grain, and vegetables. It is our aim to have those adapted to the different forms of crops which they are designed to cover.

We put out to the agents a circular at the beginning of the crop year before the hail seasons begins containing instructions for the writing of these classes.

I would be glad to give the clerk a copy of that "How to Write," as we call it. In that we particularly call the attention that it is the desire of the company that no crop be insured for more than 75 per cent of a conservative estimate of the anticipated fair value. That is regardless of the limit of liability, as stated, that the company may consider.

This leads, of course, to a very low insurance to a possible value—an anticipated value, might be more expressive. These policies are written not by the local agents situated in the communities which the policy covers, but are written on the application plan. If the grower desires hail insurance, he comes to the office of the local agent, or perhaps the local agent sees him, and after he has planted, say, a field of tobacco, he desires to cover that tobacco from damage by hail, he fills out an application blank which is sent to the eastern farm department of the company at Syracuse; there, if the insurance, or, rather, if the application is approved by the company, the policy is issued and mailed to the agent, who delivers it to the insured.

The CHAIRMAN. In what portion of the country do you sell insurance?

Mr. HOWELL. That varies according to the crops and to the hail.

The CHAIRMAN. Could you not specify in the record where it is?

Mr. HOWELL. Yes. I wanted to say that first, because it does vary. Tobacco is insured mostly in New York State, in Chemung, Steuben, and Onondaga Counties.

The CHAIRMAN. Just give the State. We do not care particularly about the counties in the State.

Mr. HOWELL. Some in Pennsylvania. Fruit is insured in New York to a less extent.

The CHAIRMAN. Do you carry insurance on tobacco in the Southern States?

Mr. HOWELL. Not through our jurisdiction. I do not know whether the company does or not.

On vegetables the insurance carried is mostly in New York State and in the commercial vegetable growing section, which is commonly known as muck crop. muck-

land sections. Grain is carried to a large extent in Maryland and Delaware and to a lesser extent in New York and Pennsylvania.

The CHAIRMAN. Which one of these farm commodities carry the highest rate?

Mr. HOWELL. Tobacco carries the hazardous rate.

The CHAIRMAN. What is the next? Give us the classification.

Mr. HOWELL. The next after tobacco is vegetables; following vegetables is fruit, and grain taking the lowest rate of any.

The CHAIRMAN. Are they on the parity?

Mr. HOWELL. As regards the rate?

The CHAIRMAN. Yes.

Mr. HOWELL. No: the rate is determined according to the susceptibility of the crop or to damage by hail.

The CHAIRMAN. Well, which is the more susceptible, then, fruit or grain?

Mr. HOWELL. Fruit is more susceptible, also has a longer growing season. Rates are determined according to the growing season and the susceptibility, and also to a lesser extent to the difference as regards the number of hailstorms and the severity of hailstorms as they occur.

The CHAIRMAN. What is the basic rate on wheat?

Mr. HOWELL. The rate on wheat is 2 and 3 per cent.

The CHAIRMAN. On three-fourths the estimated value of the crop?

Mr. HOWELL. Of the very conservatively estimated value of the crop, yes; not to exceed three-fourths.

The CHAIRMAN. Your local agents go upon the ground and estimate the crop before it is sold?

Mr. HOWELL. Oh, no, the crop is above ground before any insurance can be carried.

The CHAIRMAN. Then the estimate is made?

Mr. HOWELL. Then the estimate is made, subject to the review by the representatives of the company as to district, and that, of course, is based upon data of the average yield in that district.

The CHAIRMAN. In the payment of your losses through hail and comparing the losses to similar localities where the hail did not occur, has there been an overestimate of the loss?

Mr. HOWELL. No, sir; I think not.

The CHAIRMAN. Then you may say that you have reduced it to a science, and not only that, but you find the insured is careful in making the estimate of the loss?

Mr. HOWELL. In every instance that has been our experience.

The CHAIRMAN. Have your companies prospered on this plan?

Mr. HOWELL. That varies again according to the crop we have, and our average loss ratio extending over a four-year period in which we have been writing hail insurance, taking in 1919, has been around 55 per cent; that is losses to premiums. No expenses, of course, figured in it.

The CHAIRMAN. Where did your company get sufficient data and facts with respect to losses that might occur through hail upon which it might make a fixed charge for the risk assumed?

Mr. HOWELL. Charges have been changed nearly every year according to the experience we have had, supplemented by all the data which we could gather from the Weather Bureau as to movements and severity of hailstorms. We are on the mailing lists of all the Weather Bureau stations in the territory through which we operate, and while that data is more or less general, the observers—or rather, the chief in charge of the bureau has warned us that some sections where they have a good local observer whom, if I may use the expression, is right on the job, reports every hailstorm that comes along, hail might seem more severe there and more often than in the sections where the observer is very lax. However, that is differing. Also we have the loss experience to go by and we have made all possible investigations of our own.

The CHAIRMAN. The Government has a department called Agricultural Economics which for years has gathered crop-yield statistics. Have you resorted to those statistics?

Mr. HOWELL. Not as regards hail.

The CHAIRMAN. Then you do not take the average loss per year as a basis, but you take into consideration the element of hail alone and the loss incident thereto?

Mr. HOWELL. In the loss we take the yield from year to year, and we have gotten all the information available from the bureau which you mention, from the Department of Agricultural Economics, and we have studied that, and that of course is used as a basis, as far as possible, of the amounts which the company will accept. As regard hail itself, other than as Mr. Valgren mentioned this morning, these are simply published and estimated by the Bureau of Agricultural Crop Estimates as

the annual crop loss which is brought about by hail scattered over the entire country.

The CHAIRMAN. Is it not true that the further you go into the study of this subject of loss of crops by hail and the more time you devote to its consideration the more likely you are to find the rate properly to be charged for the risk?

Mr. HOWELL. Yes, sir.

The CHAIRMAN. And to-day it is more or less of a guess, as compared to what it may be 10 years from now?

Mr. HOWELL. We hope to improve, of course.

The CHAIRMAN. Are your companies interested in any other forms of crop insurance?

Mr. HOWELL. To a very limited extent.

The CHAIRMAN. Have they carried insurance on other crops?

Mr. HOWELL. We have prepared and issued a form of policy, but I am speaking—

The CHAIRMAN. A form policy—do you mean losses generally to crops from all causes?

Mr. HOWELL. Losses generally to crops; yes. You asked me, though, if we had issued such policies. We have practically issued none through our department. I am not prepared to say as to the western department; what they have done I do not know.

The CHAIRMAN. How general is the policy? Does it cover all losses?

Mr. HOWELL. Our policy, as I remember it, covered all losses over which the farmer had no control. In other words, incident to weather, insects, and disease, with the exception of hail, which was covered under a separate policy.

The CHAIRMAN. Do you want to discuss that phase of the subject, namely, general crop insurance, at this time?

Mr. HOWELL. Whichever way you prefer. Would you like to know anything more about—

The CHAIRMAN. Had you finished the discussion of hail insurance?

Mr. HOWELL. Not entirely. I wanted to know if you care to hear anything more about hail insurance.

The CHAIRMAN. Yes; complete that.

Mr. HOWELL. After the amount of the policy, or, rather, the amount of the insurance per acre is determined which, as I have explained, is on a very conservative estimate of the anticipated value of the crop, then in the event of loss on the tobacco policy, if there is from hail a total destruction of the crop—and I assume perhaps you would like to know something of the adjustment of those losses—those are so worded that in the event of total destruction by hail of all or any portion of the tobacco, which is the subject of this insurance, the liability of the company shall be limited to the amount of the actual outlay by the insured in connection with the tobacco plants so destroyed up to the time of the hail storm causing such damage. In other words, we are endeavoring to put it on the basis of the investment which the farmer actually has in the crop, feeling that that is the correct basis of insurance, where he has a sound value, and a real value in that, and all our efforts along the line of hail insurance have been to that end.

The CHAIRMAN. Your companies have found, as I presume others have, that there is a diminution in the number of policies being issued now?

Mr. HOWELL. Not through our department. Our business has increased. Of course, we are relatively a new department. Hail insurance in the East is relatively new. The other men who have been talking about hail insurance on growing crops are from the West, where it has been a factor for many years. Up to a comparatively recent time it has been a new feature here in the East and, of course, it has grown with us each year.

The CHAIRMAN. Yours is an old-line company, is it not?

Mr. HOWELL. Yes.

The CHAIRMAN. I am going to ask this question: Does your company contemplate extension of insurance to other well-known farm crops?

Mr. HOWELL. As regards hail insurance?

The CHAIRMAN. No; as regards losses from other causes?

Mr. HOWELL. If we can get sufficiently reliable data on which to base experience and rates I think that the company would be interested in doing that.

The CHAIRMAN. Well, that is a thought that I have had for some time. How do you suggest that we shall get this information? Do you think it is practicable and proper that the Government should attempt to cooperate with the States and the counties through the local county agents of the Department of Agriculture in the collection of necessary data?

Mr. HOWELL. I think the county agent is the very best medium for gathering that data. He is the man who probably has the most intimate knowledge of the agriculture of his county, probably more so than any other man in the county, even though he be a native of the county. It is his business. He knows where the good crops are grown, where the poor crops are grown, and the companies seeking to arrive at a fair and just and adequate basis for insurance need a limited territory—a restricted territory, on which they know the status of the crop situation; that is, the kind of crops that are grown, the yield of those crops, and the principal hazards to which they are subjected in any county.

Speaking of the East, the counties vary largely in size. Some are large with 20 or 30 and sometimes as high as 50 townships; others have only 6 or 7 townships. That ought to be brought down to townships as far as possible, and even the townships subdivided where the townships are large, as to the good, poor, and fair districts in that township.

The CHAIRMAN. The Secretary of Agriculture. Mr. Wallace, this morning stated to the committee that he thought there should be the widest possible distribution of insurance, so that if there is a failure due to frost, for instance, or excessive moisture in one part of a district, it would inure perhaps to the advantage, due to the larger price paid, to the part of the district not affected, and the one receiving the larger profit because of the loss to the other should make that up by way of adjusted compensation. Do you understand that proposition?

Mr. HOWELL. Theoretically it is right. The difficulty in practice it would seem to me would be to get the farmers in the good section to carry the insurance for the farmers in the poor section that is likely to get the drought.

The CHAIRMAN. Of course, you are specifying a mechanical situation, but frosts or excessive moisture or drought may occur in one section of the country in one year and in another section the following year.

Mr. HOWELL. Yes; and yet it is not true that drought is more likely to occur in a certain section year after year than in another section?

The CHAIRMAN. It is more likely to occur in Kansas and northern Montana than in Mississippi, I grant you.

Mr. HOWELL. Would the Mississippi farmers, then, carry the insurance for the Kansas farmers?

The CHAIRMAN. I did not make it that broad.—But take, for instance, the wheat belt, the Mississippi Valley States—that is, the prairie States. The conditions are not very dissimilar in South Dakota and in Oklahoma. There is a difference, I agree, but there is a similarity. There might be a drought in one section this year and not next year, so may it not be evened up over the whole section of the country year in and year out?

Mr. HOWELL. I am not familiar in the West, and without having been in that section, I think perhaps it is.

The CHAIRMAN. I am not a witness, but I am going to make this observation: I know something about fruit in the West. We have the bottom lands and the hill lands; one year the frost strikes the hill lands, or maybe there is too much moisture for suitable pollination, or it may operate the next year in the lowlands, but over a period of 20 years they average about the same; one year the hillman is fat and the bottom-land man is poor, and the next year vice versa. Now, insurance could be carried so that one would offset the other, so that a man would not be rich one year and poor the next. That is one of the happy things I think crop insurance can secure.

Mr. HOWELL. I would like to see it worked out, and we are trying to work out some basis that is sound and that is practicable and that the farmer will buy. Incidentally, the farmer must buy.

The CHAIRMAN. You think the county agent and the Department of Agriculture, through various other agencies, like the Weather Bureau and the Crop Statistics gatherers, working in cooperation with the States, could furnish data sufficiently reliable to attract the consideration of insurance companies?

Mr. HOWELL. If they went about that in the proper way. I think that data to-day, particularly crop statistics, have been too general and extended over too large an area to give sufficiently reliable data on which to base experience. They could be brought down, going at it with that idea in mind, that you are after crop insurance, and working with the cooperation of the companies perhaps.

The CHAIRMAN. I think there is a possibility of Congress—with the aid of you gentlemen and others, stabilizing agricultural incomes through the medium of insurance, also to construct a basis for rural credits, two things being essential to a stabilized income in agriculture which would do much to keep the boys and girls on the farm, in my opinion.

Mr. HOWELL. Absolutely. I agree with you. The CHAIRMAN. That is what I am interested in and I do not know just how to go at it to get the thing I want.

Mr. HOWELL. I think—in fact, I know—we are together in that. The companies are casting around, endeavoring to find some way that they can work out a salable policy, and at the same time a policy that will not mean ruin in the case of an extensive crop failure that will extend almost all over the country.

Our experience, if you would care to know something about that—

The CHAIRMAN. We would be very happy to.

Mr. HOWELL. Our experience started in 1920 on the basis of the investment which the farmer had or would have in that crop, and we worked out a schedule in the fall of 1920 on winter grain, taking the operations which would be performed, such as plowing, disking, harrowing, rolling, drilling, seeding, cutting small grain, shocking, twine, fertilizing, rolling, stacking, threshing, seed, and labor, and then the land rental, which was limited not to exceed 5 per cent of the sale value, but not in any event to exceed \$12 per acre, and in the New England States that was restricted to \$10 an acre. And in order to meet local conditions in some specially favored counties we were authorized to increase several items of cost. In case a man said "I spent \$3.50 per acre for plowing that particular field; at the time I plowed it it was in a hard condition, and it cost me a little more," we were authorized to increase 15 per cent above the figures as denominated. Then the amount of the various costs, and these were stated at that time, and labor was even higher on the farm than it is to-day, that plowing was not to exceed \$3 per acre, ditching \$1 per operation, harrowing 50 cents per operation, rolling 40 cents, drilling 90 cents per acre, cutting the small grain, wheat and oats, \$1.50, seed at actual cost, the same as fertilizer. The sum of the investment as indicated by the various operations was the basis for insurance.

Then if because of any of the hazards insured against, which included the various weather hazards, insects and disease, frost, drought, he failed to realize at the end of the year or at the time of harvest or threshing an amount sufficient to pay his investment cost, the liability of the company—in other words, the company paid the difference between that and the amount actually realized.

We issued but one or two policies of that nature. Applications as they came in showed a tendency more or less to increase. In other words, to get a high investment cost, higher than it should be in endeavoring to work out a schedule which would take care of that and also to do away with the price feature.

Then, while it was not meant to virtually cover the price, if the price dropped, say, if wheat dropped from \$2 a bushel to \$1.50 a bushel from the time that the crop was above the ground to the time it was harvested, that crop is always subject to certain losses because of weather conditions, and those could be properly or improperly claimed by the farmer as a loss and the company would pay, which was not within the hazard of crop insurance.

The CHAIRMAN. What do you think about the testimony of Mr. Valgren and his theory that the total loss should be based upon the net investment rather than upon any anticipated profit the farmer may have? Suppose that the hail should destroy wheat in the milk that might go 20 bushels an acre, but the farmer had sowed 3 bushels of the acre. You could take his plowing into consideration and the interest on the investment and other factors and pay him for just his actual loss due to whatever the cause may be. Of course, he would recover less, but he would pay considerably less and he would be saved from a total loss. Do you think that is a practical way for making insurance?

Mr. HOWELL. That idea is back of all our hail operations. We aim to insure him up to the amount that he has invested in that crop. The difficulty in that in practice would be as regards the hail policy that on every policy issued it would be necessary to get a detailed statement from every individual grower as to his operations, which gives him the opportunity, if he so desires, to increase salaries, to harrow more times than perhaps he would under normal circumstances, or to report more harrowings, and it also adds very materially to the expense of writing the business.

The CHAIRMAN. I can see some of that, but a farmer could not pad his returns very much, because farmers operating in the same community are subject to about the same expense; they sow about the same number of pounds of wheat per acre and cultivate in about the same manner. Of course, it would involve a little more book-keeping and take a little longer in making adjustments, but in your form of insurance you do take into consideration the crop prospect. You say your agent carefully estimates what the land is susceptible of producing, then you say we will give you insurance on three-fourths of that. Now, that may be very greatly in excess of his actual investment.

Mr. HOWELL. I do not think we have paid in excess of his actual investment. On tobacco policies we pay up to his investment.

Mr. HOWELL. I do not think we have ever paid in excess of the investment of the farmer, and I have kept in fairly close touch with the hail business, speaking for myself and our company.

When I take insurance, Mr. Chairman, on a crop of tobacco, the plants of which stand like this [indicating] and have not been set, we don't take insurance until after they are set three weeks, then that tobacco as it stands there has no value except as prospective value, and on the tobacco we limit that to the cost of his operations. The growers come to us right along and there is a constant stress all the time to insure up to \$300 or \$400 per acre. If I may make a personal illustration, just this past week in regard to vegetables, I had a letter from the eastern part of New York State which said: "This particular grower has a very fine farm and he realizes from onions and celery every year at least \$1,000 per acre. Will you write that amount of insurance?" I said, "No, we can not write that amount of insurance; we aim to cover him up to the amount of his investment." And the most that we would consider on a crop of that nature, which has very high labor cost and fertilizer cost, is \$300 per acre. He wanted \$1,000.

The CHAIRMAN. Returning to tobacco, let me cite you this situation and see if it is true of your contracts. What is the average insurance that you place upon an acre of tobacco?

Mr. HOWELL. I should think a little in excess of \$100 per acre—not much.

The CHAIRMAN. You do not insure the plants until they are five weeks old?

Mr. HOWELL. I will read this clause to make this absolutely sure, if I may:

"This company shall not be liable for any damage caused by hail to said tobacco until the tobacco plant shall have been transplanted for three weeks, except for damage to tobacco totally destroyed by hail, and then only for the cost of resetting tobacco for the plants so destroyed, such cost not in any event to exceed \$15 per acre."

Does that answer your question?

The CHAIRMAN. It practically does; yes. Is there anything further, Mr. Howell?

Mr. HOWELL. Would you like me to go through the crop policy, just what little experience we have had? I think we transferred from the crop investment feature in order to successfully work out crop insurance in the spring of 1921.

We endeavored to, or did work out a policy based upon, first, the average yield of the individual grower extending over a five-year period, and on our form of application space was provided for the number of acres and the total yield of crops of like kind five years ago, four years ago, three years ago, and so on. That was used to determine the average, and insurance in units of measure, bushels or pounds, was based upon three-fourths of this average yield.

In order to arrive at a value to fix rates we used a certain estimated price that it was assumed the crop would be in the fall. That was not to exceed a certain amount. If the farmer felt it would be less than that, if we wrote potatoes at \$1 a bushel, and he said, "We do not think potatoes will be \$1 a bushel but we think they will be 80 cents" we wrote it at 80 cents in order to get at a basis of settlement, which was on a yield basis, but we had to work in a basis for settlement in case his yield dropped below his insured yield.

The difficulty of such a form of application was that the grower said, "That is too cumbersome; I don't know what my yield was five years ago, or even three years ago; I have forgotten where I had that crop." So we decided that we wanted to try it out, and we went to the section that seemed to us most likely to know those yields, in Aroostook County, Me. I went down there personally myself and spent some little time calling upon growers. The local agent would take me out and say this man was a good grower and it was the consensus of opinion there that this policy offered them no protection whatever, that it was not adapted to their needs; and I have here a letter which was written May 26, 1921, on the subject of crop insurance, in which it says:

"Since the writer had the pleasure of going over this proposition in detail with State Agent Alden and representative of Mr. Simmons's office, we have given the proposition a good deal of effort and have conferred with a great many of the large growers throughout the northern section of this country and with very unsatisfactory results, due entirely, in our opinion, to the form of policy which has been offered. In the first place, the policy insuring the yield of the crop does not appeal to the farmers, and further, when you explain to them that this is limited to 75 per cent of the average, in every case we have been told that it was not a form of insurance interesting them at all, and I can best illustrate it by what was said to me by Mr. Hoyt, from Easton, only two days ago, as he came into this office without solicitation

to look over this form of policy and had intended to buy crop investment insurance. He is a large grower, has been very successful, and when I explained to him our present form of policy he said that it was absolutely nothing that would do him any benefit, and said that with the better grade of fertilizer which we are now getting than during the war his opinion was that the crop would average better this year than the last five years, and he believes the chance is very remote of the crops averaging less than 85 or 90 per cent of former large yields.

"We believe that an investment policy based upon the actual money invested in the seed, planting, cultivation, and harvesting the crop, exclusive of any land rental, would be a safe and salable proposition, and until some such forms can be worked out we can not, under the present form of policy, solicit successfully or advise our customers to buy."

They also say, "Frankly, the whole program is not practical for this community." That was the situation as it stood in 1921. Just a few days ago, before we knew of the work which you were at here and of the committee hearing that you had planned, there came to my desk a crop report published by the United States Department of Agriculture which gave the yields obtained in Maine on various crops for 1921, the year of which I spoke and last year, 1922. I worked out and addressed to Mr. Simmons, manager of the eastern department, a letter which I would like to read parts of.

The CHAIRMAN. Why not put that in the record? We will read the record anyhow. Mr. HOWELL. It does not all deal with the potato situation and I think that is the thing bearing this out—but whichever you prefer.

The CHAIRMAN. We want to move along as rapidly as possible.

Mr. HOWELL. I do myself.

The CHAIRMAN. Statements that are prepared we put in the record.

Mr. HOWELL. I am sorry to say this is not prepared; it is simply as written and only certain parts of it apply.

The CHAIRMAN. Well, go ahead then.

Mr. HOWELL. I will start:

"The general impression—referring to 1921—was that with the large quantity of fertilizer used, which is from 2,000 to 3,000 pounds per acre, there is very little variation in yield from year to year. The growers and agents claimed that if their average five-year yield was, for example, 100 barrels per acre, which they say is very near their average, they would never drop as low as 75 barrels in any one year. You will recall that our policy provided that the estimated yield insured under the policy was based on production of not exceeding 75 per cent of the average yield of similar crops obtained from past experience estimated if possible for at least five years.

"With this explanation, I have before me the Maine Crop Review for that year and the year 1922, issued cooperatively by the United States and the Maine Departments of Agriculture. From that I observe that the potato acreage of Aroostook County for 1921 was 100,491 and in 1922 it was 105,555. The average yield per acre obtained in 1921 was 320 bushels, and in 1922 this dropped to 174 bushels per acre. The 1922 yield, therefore, was but 51 per cent of the yield obtained in 1921 and but 53 per cent of an average yield of 300 bushels per acre. To make it still worse, in 1921 the price was 43 cents per bushel, which gave for Aroostook County a total value of the potato crop in 1921 of \$27,333,532, and in 1922, of \$8,264,956, which is approximately but 53 per cent of the value obtained in 1921.

"This low yield was brought about by a period of heavy rains which began in June and continued well in August. Very low prices, due to a large total crop in other sections of the country, brought about a resulting low value per acre, making it a disastrous year for the Maine growers."

I can summarize, I think, that those figures, under either form of policy, mean that on every investment policy written the loss would have been probably from \$22 to \$122 per acre, and under the yield policy would have been 20 to 75, or even more, perhaps 100 bushels per acre.

The value per acre obtained by the grower in 1921 was \$272 and in 1922 this value dropped to \$78.30, and their investment on a conservative basis to carry this was \$100 to \$200 per acre. At that time they were putting in a ton of fertilizer per acre costing from \$75 to \$80 per acre, and some putting in 3,000 to 3,500 pounds.

It simply points out some of the dangers that have to be taken into account.

In regard to your question of getting suitable information which would give the company a basis for extending their operations, I took it on myself to address the county agents of New York State, explaining to them that we were interested in trying to work out a salable proposition for crop insurance and asked them for information concerning their county, putting it in the form of a questionnaire; had printed blanks

which divided the counties into townships, with the name of the township, and then asked them to give the principal cash crops of that township. That included all the crops which went to make up the income of the farmer. Then, if possible, to classify that township. Making it easier for him, I used a basis of 1, 2, 3, 4; or, in other words, excellent, good, fair and poor, and endeavored to get through that some reasonable basis of arriving at the different hazards which might be encountered in any one county. I did get very good cooperation on the part of the county agents. Some neglected to answer, but you know in any form of questionnaire there is the human element; some lay it on the desk and say, "I will do it in a day or two," and it becomes forgotten.

That to-day has been our principal experience. I would be very glad to leave, and have printed in the record if you so desire, the different forms of policies which we use for hail insurance, the rates which we have for the different sections which I and other men in Mr. Simmons's department spent considerable time to work out carefully as regards the hail hazards. That is, in a section which our experience and the experience of the growers showed that they were more likely to get hail we endeavored to increase the rate there and decrease it in a compensating measure in another section.

Our experience in one or two counties in tobacco was that our losses to premiums were 250 per cent and in other sections it was less than 50 per cent. In those sections where we could never hope to get a rate to pay us for our losses we increased it as much as we thought was fair, bringing it down in other sections. That same thing applies to apples and wheat, which we have just instituted this year. It is too early to write any as yet, but that explains what we are trying to do as regards hail insurance.

The CHAIRMAN. Can you supply the committee with a statement of that kind?

Mr. HOWELL. Yes.

The CHAIRMAN. How soon?

Mr. HOWELL. As soon as I can get it together. I have with me a specimen policy of each kind and the rates as applied.

The CHAIRMAN. I would like to have you do it, and it can follow your testimony.

Mr. HOWELL. I can get that together and give it this afternoon.

The CHAIRMAN. Or to-morrow morning, if you will be in the city.

Mr. HOWELL. Yes; I will be in the city. I will stay throughout the hearing, because we are here to learn.

The CHAIRMAN. We may find it beneficial to hear from you later in the hearings.

Mr. HOWELL. Any time that I can be of assistance I will be glad. That is what I would like to do.

The CHAIRMAN. The committee appreciates greatly your kindness in that matter. (The statement furnished by Mr. Howell is as follows:)

Mr. O. G. Howell, of Syracuse, N. Y., submitted to the committee the following statement, which was ordered to be incorporated in the hearings:

"The Home Insurance Co., New York, through its eastern farm department, has made two attempts to insure growers against disastrous financial loss by crop failure caused by the elements, including frost, winterkill, flood, drought, insects, or disease.

"The first was in the autumn of 1920 and the kind of crops was limited to corn and (or) grain and our policy guaranteed a return to the grower on the crops insured equal to his investment therein. If by reason of any of these causes the sale price at the time of harvest would not bring a return equal to the investment, this company contracted to make up the deficit.

"The amount of this investment was agreed upon in the policy, a specific item for each operation or factor making up the total as follows:

	Per acre.		Per acre.
Plowing for grain.....	\$3. 00	Twine.....	\$0. 60
Disking (per operation).....	1. 00	Hauling and stacking.....	1. 50
Harrowing (per operation).....	. 50	Threshing.....	1. 50
Rolling (per operation).....	. 40	Seed, various.....	
Drilling or seeding.....	. 90	Commercial fertilizer, at cost.....	
Outting small grain.....	1. 50	Land rental, 5 per cent of actual sale value, but not to exceed.....	12. 00
Shocking small grain.....	. 70		

"For the New England States the item of land rental in schedule of costs shall not exceed \$10 per acre.

"In order to meet local conditions in all counties, agents are authorized to increase each of the several items of cost not exceeding 15 per cent, excepting rental value.

"The premium charges indicated in rate card must be collected on all business written during the spring writing season. An addition of \$2 per hundred dollars

insurance must be made upon business submitted during the fall writing season. Between December 10 and March 25 no business of this class will be accepted.

"The following general rules were also observed:

"To write crop-investment insurance at reasonable rates, policies issued in the fall against the hazards of winter must be written before seasonal conditions render losses from winter causes likely. The fall writing season will begin when the crops are above ground and in a healthy growing condition and end December 10. No insurance accepted before March 25.

"Where insurance on rental value is desired, limit such insurance to 5 per cent or less of a very conservative estimate of the value of the land. A tenant farming on shares has no rental value interest, but one paying a cash rental may insure for rent actually paid, not exceeding, however, limit quoted on rate card, such rental to be shown in application. An owner renting to tenant on crop share may insure for 5 per cent of land value, not exceeding limit shown in rate card. The tenant may insure his investment of labor, seed, etc., as per schedule.

"All policies expire the October 15 following the date written.

"Applications written on winter wheat will be accepted only during the fall writing season.

"Sale of this form of policy was virtually withheld by us because when applications began to come in, indications were that only growers who were not likely to get returns equal to the amount insured were seeking the insurance.

"Also, we then realized for the first time that we were guaranteeing the market price to the extent of our insurance. To illustrate, if by reason of over production or any other cause the market price at the time of harvest was so low that the crop would sell for less than the insurance we could not disprove a claim that some of the causes insured against had caused reduction in yield. All crops are damaged from one or more of these causes every year and to guarantee market price was not our intention and was decidedly outside our province. We decided therefore that we must approach the proposition from some other angle.

"We then framed a policy guaranteeing against the same hazards a specified yield per acre limited to 75 per cent of the average annual yield of the applicant on the same crops in the same locality for the previous five-year period. This policy also provided coverage for damage in quality.

"Here again, applications for the insurance brought realization of defects in the general plan. A marked tendency to exaggerate past yields in order to obtain more insurance was observed. Once more the insurance attracted all the less successful growers. The growers in the best localities and (or) using better farming methods insisted that their yield never goes so low as the amount of insurance we were willing to allow.

"Underwriting difficulties also became apparent. Our agents maintained that the policy was cumbersome to handle and that most growers could give no definite figures concerning the acreage grown and yield obtained on like crops in the previous years. The demand from the growers seemed to be for a policy guaranteeing a certain fixed sum per acre without regard to the yield.

"We decided, therefore, to withhold this policy from all territories except the highly specialized potato section of the State of Maine, Aroostook County. There we offered it, to try it out in a small way. We were, however, unable to sell a single policy, as the growers insisted that a policy of this kind offered them no protection whatever.

"These statements are, however, disproven by figures showing the crop yields for Maine for 1921 and 1922 published in the Maine Crop Review, which is issued cooperatively by the United States and the Maine Departments of Agriculture. This publication states that the potato acreage of Aroostook County for 1921 was 100,491 and in 1922 it was 105,555. The average yield per acre obtained in 1921 was 320 bushels, and in 1922 this dropped to 174 bushels per acre. The 1922 yield therefore was but 51 per cent of the yield obtained in 1921 and but 58 per cent of an average yield of 300 bushels per acre. To make it still worse, in 1921 the December price for potatoes was \$0.85 per bushel and in 1922 the price was \$0.45 per bushel, which gives for Aroostook County a total value of the potato crop in 1921 of \$27,333,552, and in 1922 of \$8,264,956, which is approximately but 33 per cent of the value obtained in 1921.

"Putting the above on an acreage basis, in 1921 the average grower of the county received \$272 per acre for his crop, and in 1922 this same average grower received but \$78.30 per acre.

"This low yield was brought about by a period of heavy rains which began in June and continued well into August. Very low prices due to a large total crop in other sections of the country brought about a resulting low value per acre, making it a disastrous year for Maine growers.

"Seemingly, in 1922 under either of the policies outlined above losses would have been sustained on practically every policy written, varying from 25 to 50 bushels per acre under the yield policy, and in many instances undoubtedly more and under the investment form of coverage the loss per acre would have varied from \$25 to \$125 per acre, depending upon the insured investment allowed.

"This department of the company has issued practically no crop policies. Our experience, however, has led us to the conclusion that both of our attempts at crop insurance were unsuccessful and at this time no policy contemplating coverage against all of the above hazards is contemplated. Our undertakings now on crop insurance are confined to the one element only, and that is hail."

The CHAIRMAN. Now, Mr. J. H. Griffin.

STATEMENT OF MR. J. H. GRIFFIN, PRESIDENT NORTHWESTERN FIRE & MARINE INSURANCE CO.

The CHAIRMAN. Mr. Griffin, give the reporter your name and occupation.

Mr. GRIFFIN. John H. Griffin, president Northwestern Fire & Marine Insurance Co., Minneapolis, Minn.

The CHAIRMAN. Yours is a so-called old-line company?

Mr. GRIFFIN. Hail writing only.

The CHAIRMAN. Hail writing?

Mr. GRIFFIN. That is, we write hail in addition to fire. No crop loss.

The CHAIRMAN. Just hail?

Mr. GRIFFIN. Yes.

The CHAIRMAN. How long has your company been writing that form of insurance?

Mr. GRIFFIN. Twenty-two years.

The CHAIRMAN. That is about the oldest company handling hail insurance, is it not?

Mr. GRIFFIN. Well, the St. Paul and the Northwestern are about the oldest stock companies.

The CHAIRMAN. I will not ask you any further. Go ahead, Mr. Griffin, and give us what you have to say.

Mr. GRIFFIN. That is all right; ask me any questions you want.

The CHAIRMAN. Give us a little history of the company in connection with handling hail insurance and how you got into it.

Mr. GRIFFIN. We have been writing hail insurance ever since we were incorporated in the Northwest, and, of course, we extend our operations in the Middle West, the Plains States, and Mississippi Valley, and our record has been none too good. We have made a little profit, possibly 5 per cent over the period, net.

The CHAIRMAN. That is, you have netted 5 per cent over the period of 20 years that you have been writing hail insurance?

Mr. GRIFFIN. Twenty-two years. We have had our ups and downs, of course—lean years and strong years.

The CHAIRMAN. Did you give the particular locality in which you sell this form of insurance?

Mr. GRIFFIN. Montana, North and South Dakota, Minnesota, Iowa, Nebraska, Kansas, Oklahoma, and Texas. We confine our operations largely to that territory, the Middle West States.

The CHAIRMAN. How extensive is your business, Mr. Griffin, in that line?

Mr. GRIFFIN. Well, we have written as high as a million and a half annually, in 1919, but the business has decreased rapidly since then on account of the conditions in the agricultural States.

The CHAIRMAN. Have you modified the terms of your policy considerably since you first started 22 years ago?

Mr. GRIFFIN. We first started to write an unvalued policy in 1898, then we changed to a valued policy, so much per acre. The original amount was \$12 per acre limit, and that was about the extent of the insurance carried by the farmer, \$12 per acre. Since then the limit has been increased up to \$24 per acre, but the single companies have written largely on a \$12 basis and the form of policy has changed in so far as the adjustment is concerned. The original adjustment was based upon the amount of loss specifically. Now it is based upon a percentage.

The CHAIRMAN. What is the rate you charge for the risk?

Mr. GRIFFIN. It runs from 2 per cent in Iowa to 16 per cent.

The CHAIRMAN. Where is that?

Mr. GRIFFIN. In Colorado; some portions of Colorado. The average rate is about 6 per cent over the territory.

The CHAIRMAN. And do you insure the full prospective value of the crop?

Mr. GRIFFIN. Up to \$24 per acre.

The CHAIRMAN. And you pay that loss in case of total destruction?

Mr. GRIFFIN. In case of total destruction; yes.

The CHAIRMAN. Whether there was a bumper crop or a small crop?

Mr. GRIFFIN. It makes no difference. Of course, it is based upon the prospective yield. The policy is written at the time the crop is up, and the farmer expects, of course, to have at least 15 bushels per acre. The average crop return, I think, is about 14 bushels.

The CHAIRMAN. Many times they collect, I assume, a sum of money very much in excess of the actual loss.

Mr. GRIFFIN. I do not think so on the adjustment system.

The CHAIRMAN. Explain the adjustment system, Mr. Griffin.

Mr. GRIFFIN. Well, we write up to \$24 per acre, and then if we have a 25 per cent loss we pay him 25 per cent of the amount of insurance carried under our policy. Now, the amount of insurance carried by the farmer is based upon the prospects of his crop. No crop is going to yield less than 15 bushels, anyway. They may get less through damage, insects, or climatic conditions; but he is insuring his crop on the basis of the prospective yield.

The CHAIRMAN. And not the actual yield?

Mr. GRIFFIN. Well, he could not determine the actual yield, and we could not determine it.

The CHAIRMAN. Well, that might be difficult; but for a poor stand, if it is a total loss, he would get \$24?

Mr. GRIFFIN. If he has the crop, if it has not been damaged in any other way preceding the damage by hail. It may have shrunk away by drought; then he would not get that; it would include the damage to the crop preceding the storm.

The CHAIRMAN. But do you not think, considering the various elements you have mentioned, that there is a higher value than the actual loss based upon his net investment?

Mr. GRIFFIN. Based upon his investment?

The CHAIRMAN. Yes.

Mr. GRIFFIN. Well, we presume that rate as near as we can. Of course, the cost of putting in the crop varies considerably, but there is no other way in which we can insure a growing crop.

The CHAIRMAN. You are satisfied with the basis of your policy?

Mr. GRIFFIN. We tried the other thing and got licked on that pretty badly.

The CHAIRMAN. What other thing?

Mr. GRIFFIN. The nonvalue.

The CHAIRMAN. Explain that.

Mr. GRIFFIN. No value fixed for the crop except we had a limit of loss to \$12 per acre and then adjusted the loss on more or less cost. Since then, of course, the crops have been worth a good deal more and the cost at the farms has increased a good deal.

The CHAIRMAN. Do you think this experience of 22 years has put the company in possession of facts on which it can safely estimate the loss and what the premium should be?

Mr. GRIFFIN. I think so. The experience we have had. It has been rather experimental up to the last 10 or 15 years. There have been very few companies writing hail insurance up to 10 or 13 years ago; only two or three companies outside of the mutual companies writing that policy at all. Now we have figures to work on that we believe are fairly accurate.

The CHAIRMAN. Have you found you received help from the Department of Agriculture and from the State and Government statistical agencies?

Mr. GRIFFIN. Well, we have, but not material. We base our rates upon our own experience over a period of years.

The CHAIRMAN. Then it is your view, after the experience of your company for 22 years, that you have a practicable basis upon which to make a charge for the risk assumed by the company in selling hail insurance?

Mr. GRIFFIN. Our own experience.

The CHAIRMAN. Have you thought, Mr. Griffin, of going into insurance on other crops?

Mr. GRIFFIN. No.

The CHAIRMAN. Are you interested in that subject?

Mr. GRIFFIN. Why, I would like to see a plan worked out. I would not want to work it out myself.

The CHAIRMAN. You would be willing to contribute whatever you could along that line?

Mr. GRIFFIN. Yes; I would be glad to do that, but not in money—just experience.

The CHAIRMAN. I think your experience is more valuable than your cash now.

Mr. GRIFFIN. Permit me to say this: There is no demand for a crop policy in fixed territory. The demand is in northern Montana and western Nebraska and western Kansas, and the drought districts of Arizona. There is no demand in our State.

The CHAIRMAN. Because hail is the largest element of your damage, is it not?

Mr. GRIFFIN. In Plain States; yes.

The CHAIRMAN. Though I suppose drought is a very considerable factor, too?

Mr. GRIFFIN. Oh, not very much, excepting west of the river in the Dakotas and Montana. In Montana it is a very serious menace all the time.

The CHAIRMAN. What would you advise this committee to do in order to help along the line which we desire to render assistance?

Mr. GRIFFIN. Well, I presume a crop policy could be written safely over a large area. I think, if you could get all the farmers to contribute. You can not do that, of course, because the farmer in the settled diversified farming section does not want a crop policy and does not want to contribute to the districts where they can not raise crops. I think the stock companies, the larger companies, would be glad to work out some plan of general crop coverage if they thought they could do it with any degree of safety to themselves. Possibly the way to do that would be to secure the information from the county agents and the Department of Agriculture, and from that they could make proper deductions. It seems to me like a hopeless job, though.

The CHAIRMAN. To go beyond hail?

Mr. GRIFFIN. Yes; beyond anything, because you have got the human equation there. You have got the ne'er-do-well farmer in the arid districts, and countless other things.

The CHAIRMAN. You do not mean to say that hail is the simplest element to insure against?

Mr. GRIFFIN. Yes; it is in one way. It is a tangible thing to insure against, because you can measure its loss, and you can not the other, the poor cropping and the droughts. It is a pretty hard thing to frame up. I would be afraid of it. I think the companies generally want to work out something. The companies are willing to try it if they have the right data to work from.

The CHAIRMAN. Of course, you have not operated in the fruit section of the country?

Mr. GRIFFIN. No; we do not write fruit at all.

The CHAIRMAN. And hail is negligible in the fruit section, does not amount to a row of beans. The losses there are from other factors that are important. So, take it with cotton, hail down in the South does not amount to a fig. There are other things, like animal pests, to be considered, droughts, and excessive moisture and floods in many places, and I think you will agree in those instances you have to go to the community and pick out its particular element of loss and attempt to gather statistics and work out the basis for the risk; is that your idea?

Mr. GRIFFIN. Yes, sir; I think the larger companies are trying that in a way; they are working out a plan and are very anxious to have it succeed, but I say there is no demand for crop coverage in the well-known districts. I do not believe the companies could sell a crop policy in Iowa, southern Minnesota, southern Nebraska, or any other settled district. They could not sell it in Illinois. But they can sell it in western Kansas and western Nebraska and the high line in Montana, because they only have a crop once in five years—especially in Montana.

The CHAIRMAN. Of course, in those States you have mentioned wheat and corn are their particular crops.

Mr. GRIFFIN. Wheat is the large crop.

The CHAIRMAN. And hail is the particular thing that causes the damage in the field in which you operate. I can see your viewpoint about where you are, but it does not apply to other sections of the country.

Mr. GRIFFIN. No; I did not mean to have it apply except to the Middle West States and the Plain States.

The CHAIRMAN. Do you think if the law should be enlarged or amplified, or direction made to the Secretary of Agriculture to cooperate in the collection of facts and data and statistics, the reports to be available for use by mutual and private companies and old-line companies, and what not, that would be the proper procedure to follow in the matter?

Mr. GRIFFIN. Very valuable, indeed. We would all like to see the farmers taken care of properly and protected in so far as we can protect them, but in the known districts it is hard to sell a crop policy.

The CHAIRMAN. You speak about the irrigated countries. I am from the West and have had a little to do with that. I am chairman of the Reclamation Committee of the Senate. In the Intermountain States and the Pacific Coast States, the arid

portion of them, there is a great similarity in the character of the soil and the production per acre and the cost per acre of the various 27 Government projects. I do not think it would be difficult to fix a rate after a study of years on alfalfa or sugar beets which are among the larger crops.

Mr. GRIFFIN. We are rather in the dark on general statistics of what rate we would have to charge to make it a going commercial proposition. We are rather working in the dark, because the policies the companies have been writing have not been very clear so far.

The CHAIRMAN. On what?

Mr. GRIFFIN. On the rate to charge on crop policies.

The CHAIRMAN. That is true, of course.

Mr. GRIFFIN. The companies started in, of course, on rather an experiment and they wiped them off the first season. There is a tremendous liability there.

The CHAIRMAN. Yes. Congress twice has gone to the aid of the drought-stricken sections of Montana and North Dakota, but that is a restricted section.

Mr. GRIFFIN. Yes; it does not exist in other portions east of the Mississippi.

The CHAIRMAN. But you take your reclaimed lands and they have assured crops; they are not comparable to the humid climate regions; they get the water they want and they get the continuous sunshine, and are not subject to very many elements of damage.

Mr. GRIFFIN. We have had very good experience in Washington and Oregon and Wyoming with hail in irrigated and nonirrigated districts both.

The CHAIRMAN. Is there something further, Mr. Griffin, which you want to say?

Mr. GRIFFIN. I do not know. Any questions you want to ask I will be glad to answer and give you any information I can.

The CHAIRMAN. Well, you have been helpful.

It has reached the adjournment time and we will go on to-morrow at 11 o'clock.

(Whereupon, at 4 o'clock and 10 minutes p. m., the committee adjourned until to-morrow, Wednesday, at 11 o'clock a. m.)

INVESTIGATION OF CROP INSURANCE.

WEDNESDAY, APRIL 25, 1923.

UNITED STATES SENATE,
SELECT COMMITTEE ON CROP INSURANCE,
Washington, D. C.

The select committee met, pursuant to adjournment, at 11 o'clock a. m. in room 324, Senate Office Building. Senator Charles L. McNary presiding.
Present: Senators McNary (chairman) and Keyes.

The CHAIRMAN. Mr. Bissell, the committee is very anxious to hear from you this morning. Your company and you personally have had experience in the selling of crop insurance, and I hope you will proceed and tell us what you think the committee should know in regard to this subject. We are anxious to be informed as completely as possible on the subject.

STATEMENT OF MR. R. M. BISSELL, PRESIDENT OF THE HARTFORD FIRE & GUARANTY CO., HARTFORD, CONN.

Mr. BISSELL. I shall be very glad, Mr. Chairman, to give the committee now or hereafter any information I have. After going through this hearing and seeing the print of the discussions, perhaps I can send some prepared data which would be more useful than anything I can say to-day.

The CHAIRMAN. Thank you, Mr. Bissell.

Mr. BISSELL. Furthermore, we have called here men who will address you to-day who have directed communications for us in the field, and we also have one man who actually sold a good deal of this full coverage crop insurance, as also men who settled losses, and therefore have an intimate, down to the ground knowledge of the difficulties of the problems involved.

With your permission, I should like to say a few words on the hail matter. Before doing that I want to say that it is unsafe, in my opinion, to apply exactly the same principles to hail insurance as must be applied to this larger problem, because the damage done by hail is an ascertainable, measureable damage which is not affected by the personal element.

No farmer sows a crop with the expectation of subjecting it to a hailstorm, and, having taken out hail insurance, he can not bring about a hailstorm. The hail adjusters, with the help largely, I may say, of the Department of Agriculture, have become so expert in predicting hail damage to various kinds of crops that it is very difficult for a farmer to pretend that the damage from a rainstorm or a windstorm, for instance, has been caused by hail.

We have had thousands of claims where there was little, if any, hail in connection with the storm, perhaps none at all; but the farmer would allege that on his farm there was hail and the serious damage to his crop was the result of hail. However, the records of the Department of Agriculture and the records of our own adjusters are full of figures and other matters which enable an adjuster to detect the difference between windstorm damage and hailstorm damage. In other words, the marks of the hail are discernible to an expert. So we have there a very specific problem to deal with, and it can be dealt with in a much more liberal and uniform way, and the laws of average can be applied to it in a very broad way, which is quite different from the circumstances which surround the placing of crop insurance.

Now, in the history of hail insurance the theory of the actual loss dependent on the actual value of the crop was tried out and found to be a failure. In the first place, it should be borne in mind that hail insurance is taken out, we might say, generally, I will not say in a hundred per cent of the cases, but generally on the crop which promises to be a fine crop. It is not taken out until the crop is well above ground

and has a certain "stand," as we say, and looks to be a good crop. The ground is well covered and the "stand" is uniform and the farmer sees a fine crop ahead. That is the time he applies for hail insurance.

On the other hand, the spring may be very dry, as happened a few years ago in the Southwest, and possibly the winter wheat has not come up. I happened to come through the Arizona and Texas districts at that time and there had been practically no snow all winter, and a great deal of the winter wheat was blown out of the ground. The ground had become so dry that the heavy wind had blown the entire surface away and the wheat with it. The consequence was that in the absence of moisture the winter wheat was all shriveled up, and, while it had been beautiful ground in the fall, there was nothing but a little hay in the spring. No farmer would take out hail insurance on that kind of crop.

Where the wheat came up in the spring in good style the farmer was pretty well assured that he had a good crop in sight, and he would have laughed at a proposition to take hail insurance on the basis of what it had cost him to sow that crop in the fall and let it stand through the winter. He would have said: "No; my crop is half made now. There are only two things that can hurt it now, and those are drought and hail." Therefore, he wants to be insured, and it must be borne in mind in these cases that there is no use trying to deal with a farmer on the basis of something he does not want. In other words, we must have a contract which is a salable contract. A contract limited to \$5 or \$3 an acre for hail insurance for sale to a farmer in March or April or May would not interest him at all. There would not be any hail insurance business done on that basis. It must be sold to the farmers who have a good "stand" of wheat or corn or cotton on what the crop looks like at the time it is sold.

If it is a poor crop the farmer does not want to insure. That is the reason this so-called valued policy, with a fractional payment, was put out, and it is conditioned in all cases upon examination of the local cases by the underwriter by the home office having in mind the production of the county and the district, the experience of the country, and his judgment as to the liability of the particular agent who solicits the particular farm. If he is thought to be a little below the average of the agents, his assertion that the man is entitled to \$24 per acre will be discounted.

If we have had an unfortunate hail experience year after year in a particular county, the amount of insurance will be reduced, etc.

I fear the committee yesterday received a false impression as regards this \$24 an acre. A good many farmers get \$24. The average farmer will run between \$12 and \$15 in a district where the \$24 is permissible. You can not treat the farmer absolutely on the average basis, because he is not an average man. Taking him altogether, he is an average, but when you deal with him individually he is not an average. So much for the hail, which has been pretty well covered.

Now, in regard to the crop insurance. I may say it is my own experience that it is that of a directing business. I have talked with very few farmers. I have talked with some large producers but very few individual farmers.

With the exception of the two companies who made such disastrous failures along in 1919, I may say that we were the first company who started out on a large scale to try to do this general crop insurance business. Our ambition was and is to make it possible for farmers to get practically every kind of insurance that they need. We probably have gone a little further in that direction than anyone else.

When we started this plan, we took four men from the Department of Agriculture—the four best men we could get—and we also hired several other men who had had experience in the hail business and in insuring farm property. We also hired two or three men from the State departments of agriculture and from agricultural colleges. Altogether, I should say, we had 10 or 12 men who might fairly be called experts on agriculture and on agricultural statistics. We had, of course, as always, the very hearty cooperation of everybody in the Department of Agriculture. All the figures there were thrown open to us, and we made a more or less—rather less than more, I should say—complete study of them.

I may say that in framing a policy of insurance for a new thing of this sort it has always been my experience that the way to proceed is first to find the need and then to fit a contract to it as nearly as possible with safety to our own investment. We therefore, in considering this proposition, were guided by those considerations, and we took the obvious course of trying to insure the farmer against the loss of his investment. We advertised that proposition quite extensively along the lines of the suggestion of the chairman. We advertised how we proposed, if possible, to stabilize the farming industry, to take gambling out of farming, and to take away from the farmer the risk that he was not responsible for. We dipped into it rather liberally the first year. In that year we assumed a liability of about \$14,000,000.

Senator KEYES. What year was that, Mr. Bissell?

Mr. BISSELL. That was 1920. That was the year of the great price fluctuations. We assumed a liability of \$14,000,000. We did practically nothing in what might be called the Eastern States, east of Ohio and north of North Carolina; only \$125,000 of risk. In the Southern States we had at risk a little over \$4,000,000. In the Western States, the central belt, we had a little over \$4,000,000 at risk, and upon the Pacific coast we had about \$5,000,000 at risk. All of those fields gave us extremely disastrous results, without exception.

I might say that our average rate, which necessarily, in the light of no experience, had to be more or less guesswork, although our rates were figured with very great care and were based absolutely on the statistics of the Department of Agriculture, backed up by State department figures, etc., was about 6 per cent. The premiums we received were about \$800,000, and the losses we paid were about two and a half million dollars. So it was a rather expensive experiment. Personally I do not regret it. It was probably a very good thing.

I may say that we issued a policy which was based upon an assumed cost of production—so much for plowing, so much for harrowing, so much for seed, so much for fertilizer, so much for land rental, etc.

The CHAIRMAN. Did you try to calculate the farmer's actual investments as a measure of the losses?

Mr. BISSELL. We did try to. At the time those conditions were made and those policies were issued labor, fertilizer, seed, etc., were at the peak prices. By the time those policies materialized everything had changed. The price had dropped 50 per cent or more in some cases and a great deal more in others. The production was largely in excess of the demand, because it had been stimulated on behalf of the Government to take care of our allies in the war. There was, therefore, no market for all of the crops which were produced, and the cost of producing them would have been a great deal less by the time the loss was settled than it was at the time the policies were taken out, and we found that the cost of producing the crops as insured in our policies was, in a great many cases, more than the crop was worth when it was finished. We had a loss on almost every policy. It convinced us of one thing, that the issuance of a policy which proposes to pay back to the farmer the total cost of production is fallacious, and that nobody can undertake it with safety and without the risk of bankruptcy to the strongest companies in the world.

In the first place, we found that the farmer does not know what the cost of production is, and there is no way of accurately finding out. There are many men in this room who have had a vast amount of experience with farmers other than in connection with fire insurance on the farm and they know the farmer as a man very intimately. If there were time afforded, I would call on each of these individually and ask for their testimony on this point, which, I am sure, would not be objected to by any of them or by Mr. Valgren; that if you should take 10 farmers in any county and ask them what it costs to plow 40 acres of land you would get 10 different answers.

The same thing is true about every operation of farming, and every item of cost of production, with the exception of those items involving the actual output of cash for seed or fertilizer, etc. Some farmers plow with hired labor and some farmers do the work themselves with the help of their children. Their estimates of cost of production are affected by conditions of that sort.

So we found that it was practically impossible, even with a careful and thorough examination, to actually measure the cost of production of a crop, especially a major crop. Occasionally we find very large operators who, in addition to being farmers, are good business men and keep books in such a way that their costs are known, but those are very few and far between.

It was, therefore, necessary to revise our plans absolutely, and I may say that this very unfortunate experience was incurred in connection with wheat, with rye, with oats, with corn, and with cotton, all the major crops. It was quite evident that we could not go on with that basis. Since that time, so far as the major crops are concerned—that is, in the last two years—we have been studying the situation and trying to improve our contract so that we would not be affected in event of loss by fluctuations in prices.

I may say that, unfortunately, one of the things that the average farmer wants most out of his crop insurance is price insurance. To a large extent, he looks upon crop insurance as price insurance and he is very much interested in that. When this business is solicited one of the first things that develops is that the farmer wants to know if he sows a crop in March or April or May that the price will not be below, say, a dollar, a dollar and a quarter, or a dollar and a half, whatever the crop may be in September when he harvests it.

Our proposition in 1920, therefore, was a perfect godsend to them, because in that case on the average the price in the fall was less than the cost of production and we paid the difference. Of course, unless we are going to have a subsidy or a gambling contract, the price feature has got to be entirely cut out.

The CHAIRMAN. The losses you sustained occurred in the year of deflation in agricultural products, in 1920, did they not?

Mr. BISSELL. Yes.

The CHAIRMAN. You say they found it very profitable. Did the farmers take advantage of their insurance contracts?

Mr. BISSELL. No; I did not mean profitable in that sense. I meant that they found it very profitable indeed to have a contract which covered them to the full extent of the cost of the crop which they had put in at the peak of prices. It saved them an enormous amount over and above the damage to the crop. In other words, we paid the losses on perfect crops because we had insured the cost of production. We had insured the farmer under our fallacious plan that he was guaranteed a return equal to his investment. That seemed a fairly good basis for insurance, but it turned out to be absolutely wrong.

The CHAIRMAN. Then, you agree with Mr. Valgren that that is a proper basis for the insurance contract?

Mr. BISSELL. I think it is one of the factors to be considered, but being in our case one of the governing bases, I think it was fallacious. I do not think experience will bear it out. In the first place, the price of the crops is affected by so many things that have no relation whatever to the costs of production. As a matter of fact, we may say that the price of wheat and the price of corn are not affected by the cost of production. They are two entirely separate matters. The price of wheat is affected by experience in South America and India and in Egypt and other wheat-growing nations, including Russia when it is in the market. If all those countries which raise wheat have bumper crops, the fact that labor costs and fertilizer costs were high in America has nothing to do with the price that our farmer is going to get for his wheat.

The CHAIRMAN. I think a portion of that statement is true. I would not agree with its entirety. You must admit that over a period of years the cost of production is less than the sale price to the farmer.

Mr. BISSELL. I think that is true.

The CHAIRMAN. Else the farmers would all go into bankruptcy.

Mr. BISSELL. Yes; that is true.

The CHAIRMAN. And while there are exceptional years, as the one you mentioned, 1920, when the cost of production exceeds the sale price; yet it is the exception rather than the rule.

Mr. BISSELL. Yes; but you are talking on the broad average.

The CHAIRMAN. But we have to meet things on the broad average, I would think.

Mr. BISSELL. I shall comment on that a little later. We, therefore, introduced in this contract a proposition—

The CHAIRMAN. Pardon me. I would like to have, and I am sure Senator Keyes would also, the commodities covered in your 1920 contracts.

Mr. BISSELL. Wheat, corn, oats, rye, barley, and cotton.

Senator KEYES. What you call the major crops?

Mr. BISSELL. The major crops.

Senator KEYES. Not taking tobacco, for instance?

Mr. BISSELL. I think in that year we insured no tobacco.

The CHAIRMAN. Then, Mr. Bissell, what causes did you have to insure against, with the exception of hail?

Mr. BISSELL. Practically everything.

The CHAIRMAN. Did you specify and enumerate the hazards?

Mr. BISSELL. I think everything except hail and fire. Mr. Thompson, did we exclude wind?

Mr. THOMPSON. We did at first, and then we put it in.

The CHAIRMAN. Have you a copy of the contract?

Mr. BISSELL. Of that old contract?

The CHAIRMAN. Yes.

Mr. BISSELL. I have not it with me, but I would be glad to send you a copy.

We tried to get away from the price feature in the second year, although we practically did no business in the second year, by putting in a provision which seemed at first very unjust, by which we provided, first, that there should be no recovery if the cost of production was equalled by the value of the crop raised; secondly, that if a crop of a certain quality and quantity were raised there should be no recovery. In other words, if a man's average production was 15 bushels per acre, and we based our contract on 10 bushels per acre, if he raised 10 bushels per acre he got no recovery, no

matter if the price dropped to zero. On the other hand, if he raised only 5 bushels per acre, but the price soared to a point where it covered his cost of production, we paid him nothing. The justification for that is this: That it seemed to us the only way in which a policy could be framed which would sell at a price that the farmer could afford to pay.

In other words, if we are going to take into account this price feature, even partially, we should have to add so much to the premium that the contract would be unsalable in everything but bad districts. We wanted to work this thing down to a point where we could get a broad sale of the policy, for you heard enough yesterday to see that the initial demand is always from the arid and unfavorable districts and in the good districts from the careless and ignorant farmers. In other words, the man who has always been a failure wants protection. The man who has always been a success does not care about it unless the cost is almost negligible. He will not pay a good price for it.

Since that time we have been practically ignoring the big crops, feeling that we had not solved the problem, that we had not the information or the machinery or the knowledge to warrant us in assuming the risk we assumed in 1920.

We have been gradually, however, building up an experience on small crops. In 1922, for instance, or liability, while not large, was double what it was in 1921, and in 1923 our liability will be more than double what it was in 1922.

Now we are insuring vegetables and tobacco in some cases. We are insuring celery and oranges and apples and fruit of various kinds. We are insuring nursery stock. We are insuring potatoes to quite a large extent in selected districts. We are gradually building up an experience and trying to get hold of the principles which will enable us to tackle the big crops a little later.

The CHAIRMAN. Mr. Bissell, did you sell many contracts having the provision that you mentioned a minute ago when you were referring to your 1920 policy?

Mr. BISSELL. Do you mean these new provisions of which I spoke?

The CHAIRMAN. Yes.

Mr. BISSELL. We sold quite a few in the South; in fact, we made those changes before that disastrous season was entirely over. We sold quite a few policies on cotton.

The CHAIRMAN. Do your present contracts contain that same provision?

Mr. BISSELL. They do, except that for the special crops we have to provide special policies. We do not issue quite the same contract on vegetables for a large canning association that we would on apples in Oregon. It is such a different proposition that the policies have to be remodeled more or less all the way through.

The CHAIRMAN. Did you decrease the charge of this insurance after you inserted those two provisions in your contract?

Mr. BISSELL. No; I should say we did not. I might say that on those subsequent policies that we issued on cotton we still continue to lose money.

The CHAIRMAN. Do you care to answer this question: In the years 1921 and 1922, did the company make a profit out of this general cotton-insurance contract?

Mr. BISSELL. The figures I have here do not disclose that exactly, but there is a small profit from our transactions in these miscellaneous crops for the two years. The figures I have here are on the basis of paid losses, and there are two large claims hanging over.

I want to say that despite our very unfavorable experience we have not given up hope by any means that some form of crop insurance for the major crops can be devised, and will be devised, which will do what we have come to think crop insurance ought to do. Possibly we had too much an idea of what crop insurance ought to be and ought to do to start with. My own ideas have undergone a great deal of modification in that respect, and I think the ideas of most of the men whose articles I have read on the subject and who have had no practical experience, because there has not been any for anybody to have except our own, perhaps, will have to be modified. I think they expect too much from crop insurance.

I think the farmers who are keenly interested in it, and they do not include perhaps the very best farmers, are expecting too much from it. In other words, I have come to the belief that it has got to be down to a basis of credit or calamity insurance.

We can not insure the farmer that he can make his average profit every year any more than we can insure any man of similar results in other business. That is to say, it can not be done without Government subsidy. It is idle to say that we can not issue that kind of contract if somebody can be found to provide money to pay the losses; but as a business proposition and for the good of the country as a whole, I believe that the only form of crop insurance for large crops will be limited to what we might call the avoidance of calamity to the farmer, the protection of his credit, and we are shaping our investment and aims to provide that kind of a contract.

The CHAIRMAN. Detail that a little more for the record. It is very interesting.

Mr. BISSELL. Well, this matter works out in the light of experience somewhat away from theoretical lines, as I have known these things to do. We have demonstrated to our own satisfaction that we can not afford to grant price insurance, and we can not afford to issue a contract based solely on what the farmer is going to get in money at the end of the year.

We have also learned from our dealings with the individual claimant and farmers that we must be very careful to not put out a contract which will cause the farmer to slacken his efforts to produce the best possible crop his land is capable of producing. That is a very important matter, indeed. In other words, our contract must be drawn so that our interests and the interests of the farmer are common. He must be under the compulsion of his own interest throughout the season to do his very best with that crop. He must not be in a position to say, "Well, let the insurance company worry; I am protected, anyway, and why not go to the circus to-day?"

In the second place, we must not do anything to make farming so certainly profitable as to bring about overproduction. That was one of the great troubles of the unavoidable situation of 1920. The Government was under compulsion to stimulate production to an abnormal extent, because when the production was stimulated was the time when we thought our allies wanted it, and most of us thought also that even if the war was over when that crop was sown the Allies would buy the crop anyway, but we overlooked the fact that they did not have anything with which to buy.

So we must guard against overproduction and slack farming; in fact, we must try to cooperate with the farmers to bring about better farming if possible. And we must not have a gambling contract which is dependent upon price situations.

Then it remains to be seen what is the least the farmer can get by with in the way of insurance and what is the utmost that the investors, like our stockholders, can afford to risk with the farmer.

This is my personal judgment, based upon as much experience as anybody has, and it is necessarily fallible and may be changed by further experience; but my experience to date leads me to believe that we have to take both the cost of production and the probable price, an unfortunate element to have to take into consideration, although I believe it must be done, in limiting the amount of insurance which we can grant to a farmer; and I think we have got to grant on these major crops insurance not much more than a good banker, perhaps, would loan a highly reputable farmer with whom he was well acquainted and with whose habits and methods of agriculture and average results he was familiar.

I would suggest some such basis as the following: We must take the average production of that farmer, if we can find it, and that is a very difficult problem, starting with the average county production, and from that going to the average production of the individual applicant. We must discount that very largely. Then we must take the very best available data that we can get as to the average price and the present prospects and discount them very largely.

With those two factors in mind we can arrive at a figure which is safe to insure that man, which must always be a figure which in the event of total loss of his crop will involve a loss to him. In other words, I do not believe that the crop insurance can ever be carried out successfully for the country on any basis which will guarantee any farmer absolutely against the possibility of a loss. He must share the loss or the whole thing will fall to the ground and result in a tax upon the country generally, which would be unbearable. I believe, further, that any system of crop insurance which guarantees the individual farmer against a possible loss would be a very bad thing for agriculture generally and for the country generally.

The CHAIRMAN. Mr. Bissell, in those statements you have made you have taken into consideration the strength of the soil and the moral risk of the individual. Do you go further and take into consideration the various factors of the elements that cause destruction of the crop?

Mr. BISSELL. Absolutely so. In other words, if I understand your question, the amount of insurance which could safely be granted, in my opinion, would be much less in a country subject to drought than in a country which is ordinarily well watered.

I would be willing to raise the limit in Iowa, for instance, a good deal more than I would in Montana. Does that answer your question?

The CHAIRMAN. That answers it.

Mr. BISSELL. That is one factor, but the others would be answered in the same way.

The CHAIRMAN. Some one has suggested that the yield for a period of years perhaps would be a sufficient guaranty against other damages like moisture, excessive or deficient, or frost, hail, pests, and things of that kind.

Mr. BISSELL. If you will bear with me a moment, the difficulty with that theory is that a man in making that sort of a statement thinks of the yield as something which is known. Now, the average yield is not known.

I venture to say that no one who has spent much time studying farming statistics on the ground with farmers—I do not mean a man in the Department of Agriculture who receives statistics from a lot of people and assembles them, for his figures are a correct average of what he has received—but get down to the men who collect those figures in the field, and I venture to say you will not find more than a very small fraction of them who will assume to be able to state the average production on any farm for a period of 10 years. What is more, there is not one farmer—and I make this statement advisedly—that knows what his average production has been for 10 years in these major crop districts.

The farmer knows one thing; he knows at the end of the year whether he has more money than he had when he started, and the careful farmer usually has if he is in a decent district, and the careless farmer usually has not; but one of the great troubles with the farming industry is that it has not yet been brought down to an actual business basis as have other forms of production; and until that has been done and until you are able to go to the farmer, as you can in some of the specialized farming industries, you will not get accurate information. Take the highly specialized industry of tobacco in Connecticut Valley. A great many of those farmers can tell you to a pound the amount of tobacco they have raised for 10 years. But you go to a farmer in North Dakota and ask him how many bushels per acre he has raised for 10 years; ask 10 farmers in the same county that question; and the different answers you will get will be perfectly nonplusing. You do not know what to do. You find yourself without a basis for going ahead.

So you have to take your Government or State or county production. Then you have to check that up to guard against possible errors. Then you have to cross-examine your farmer. You have to find out by outside investigation, first, whether he is better or poorer than the average farmer in his county. Then you have to get from him what he says about his average production. You have to discount that very liberally. There is one of the elements on which your contract with him has to be based.

That brings up the second difficulty in this business that we found very early. In the South alone, in connection with our operations in cotton for 1921, when we had begun to learn our lesson, but before we knew how badly off we were, which we did not know until along in November and December or even until the next year, we had already made up our minds that the business was being conducted in a very unsatisfactory way, and we had planned in this one company in the southern field alone to create a field of somewhere between five hundred and a thousand inspectors. I do not mean to say that we were going to hire those men for a year, but we were going to make arrangements with selected farmers and other people to give us a certain number of days in the spring and mid-summer and fall to inspect every farm on which we had insurance, and we made up our minds that this crop insurance was going to be a very expensive proposition to operate, but we could not see any other way to work it out.

The CHAIRMAN. Mr. Bissell, do you doubt the accuracy of the statistics concerning farm production per acre per farm per county?

Mr. BISSELL. If you take the Government statistics for the country as a whole they are quite remarkably accurate, and I do not want to say a word to reflect on the Department of Agriculture, because I think their work merits the best praise, but they do not pretend to have the county averages except in comparatively few counties to-day. Some of the States have county averages. Of course, the more people we can get to make county averages the more nearly we shall get to accuracy. If we have 10 men estimate the crop of the county, add their estimates together and divide by 10 we will get something nearer accurate than that furnished by one estimator.

Furthermore, no accurate record of the acreage is possible with the present machinery. A farmer will tell you that he has 40 acres of wheat. He has been all his life considering one field as a 40-acre piece, as he calls it. He has not measured that field. He perhaps has a road through the middle of it. There is perhaps half an acre of swale in it and he has not plowed to the edge of it. There is an error, therefore, in the acreage of every field which is a very vital factor in the average production. If a field that he says contains 40 acres contains only 36, your average production is seriously out of joint. And that is the thing you are basing your contract on.

I think the Government figures on a very broad average are very good, and on State averages they are quite reliable. They do not pretend to furnish them on wide scale county averages, which is the least thing we can work with.

Furthermore, we have such violent fluctuations that I am afraid we have got to have county averages for at least 10 years if we are going to have any real average for a basis rate. In our hail experience I have seen in wide districts of many States crop failures for three years in succession. Take the State of Montana. They had

crop failure for three years in succession. It is very doubtful in such extreme cases as Montana or Wyoming whether 10 years is sufficient. It is possible for Iowa that five years might do, but 10 years would be certainly safer.

The CHAIRMAN: That State has been referred to several times. As members of the Agricultural Committee, Senator Keyes and I are familiar with conditions there. But I do not think that ought to be used as a basis of comparison, because we all know that a portion of Montana will never produce abundant crops until they irrigate.

Mr. BISSELL: Of course, there is where your most insistent demand for crop insurance will come from. Take such an average State as Kansas, which has all kinds of climate in it. It is possible that we might get by with a State average in Kansas for five years, but I am certain that a county average would be on an unsafe ground for five years of tabulation.

Then, if we might assume that the statistics were absolutely reliable and accurate, we would run up against a great difficulty, which would be the application of the average to the individual farmer. In some of the plains States they have perhaps a third of the State where conditions are almost identical, but in almost every State and in almost every county of every State there are pretty wide variations in the desirability of the different farms. Needless to say, there are very wide differences in the personal equation, but almost every county has its meadows and its hillsides and its ridges and its well watered portions and its portions not so well watered, and your average county experience therefore gives you only one of the factors which are necessary in determining the rate for the individual farm. That must be done by investigation of individual results, which is a difficult problem.

I mention these various difficulties simply in order that the committee may understand why after our bitter experience we believe this matter must be begun in an extremely conservative way on these major crops.

There is another thing which complicates the problem and which is a very practical matter, indeed, and that is when this crop insurance is going to be sold to the farmer. That applies in a way to hail also. In some of the States which have set up State funds they have made it compulsory. They had to take it out, and in that way they were sure of their spread. But, ordinarily, in hail insurance the man's business is solicited when the excellence of the crop seems to be assured.

When shall we insure a farmer against all hazards? Shall it be before he has sown the seed, or after he has a good stand, or when? In our experimental way we would not insure a single crop until it had been sown and was above ground and in a healthy condition as far as inspection would show. That was well enough for experiment, but the difficulty of that plan was that if the man had a pretty good looking crop he did not want to insure it because he thought it was all right anyway. If the man had a very poor looking crop which just barely stuck its nose above ground, he was very keen to have insurance and we were very keen not to give it to him.

The CHAIRMAN: I thought you said, earlier in your statement, when you were discussing the hail insurance that if a man had a good crop he was anxious to take out insurance and if he had a poor crop he was not.

Mr. BISSELL: That is true with respect to hail.

The CHAIRMAN: That is a contradictory situation.

Mr. BISSELL: It is a rather contradictory situation. I might say that the man with a poor crop who wants to take out crop insurance is, of course, disingenuous. He thinks he has made a failure already and would like to recoup himself. That is what I had reference to. On the other hand, the man who has a good crop and wants to take out hail insurance sees the value there and he wants that value maintained until the end of the season. He has gotten to the point where he will take his chances on rust and things of that sort, but he wants to insure against hail.

We sell hail insurance in the hail belt. It is true if we sell our crop insurance in the spring, after the crop is sown and it appears above ground, if it has been a very favorable spring, the demand for crop insurance will be relatively light. We finally came to the conclusion that probably we would have to sell our crop insurance in the fall on these large crops for the next year when neither the farmer nor ourselves knew what the conditions would be.

In that way we would have to take a chance with the farmer against the particular conditions of the particular year in which the crop was going to be raised; whereas, if we wait until the spring that very important part of the crop hazard, namely, the period of sowing and germinating is a known fact. I am inclined to believe that when we get around to a satisfactory solution of this major crop insurance the insurance will have to be sold in the fall, or at a time when conditions are known to neither party to the contract.

We found that in the good States, like Iowa, it was practically impossible to sell crop insurance at any figure; they were not interested in it, which means only, of course, that we have got to get a form of crop insurance for those States which will sell for such a cheap price that a farmer will not be frightened by it.

The CHAIRMAN: Well, that is a great corn State, Mr. Bissell, and there are not many hazardous elements in nature that affect corn.

Mr. BISSELL: No. I chose Iowa as an example because it is an outstanding example. The CHAIRMAN: It is hardly an example for general crop insurance.

Mr. BISSELL: Perhaps it is not because I do not believe you can sell it there. As a general result we have in our office come to the conclusion that this crop insurance must be sold chiefly on a credit basis, the basis that anybody would give that farmer credit for, such as would justify a banker giving him that credit, and that will be speaking from the point of view of the corporation, just trying to do this thing both as a public service and as a means, perhaps, of making some money out of it. That will be the line upon which we shall try to work this problem out.

It is probably too big a problem for any one company to work out. My thought has been running along the line of a syndicate of companies, possibly 8 or 10 in number, that would undertake, in an experimental way and with possibly limited liabilities, we might say from sixty to seventy-five million dollars for the first year, or possibly a hundred million dollars for the first year, over a widely scattered territory, to work out that kind of proposition.

The CHAIRMAN: Mr. Bissell, could not the Government be helpful in that matter? Mr. BISSELL: The Government can be helpful in securing much more complete information than we now have.

The CHAIRMAN: Do you think that is the first step that should be taken; that is, a direction from Congress to some agency to make a study of facts and data upon which the rates or risks might be based?

Mr. BISSELL: I do, indeed, and I think it should be done in cooperation with several instrumentalities which exist in the several States.

The CHAIRMAN: I would like to have your idea on that.

Mr. BISSELL: A great many of the States have State departments of agriculture.

And probably the county assessors, who are State officials and not Government officials, are in a better position to secure reliable information about crop production than anybody else, especially in those States which have passed laws directing the county assessors to undertake that work.

Then, there are the State agricultural colleges which are doing an enormous amount of valuable work along this line and whose results should be combined with the results obtained by the Government.

My thought would be that the Government should make its own investigation; that it should take the results of every investigation made by public or private instrumentalities in the States and endeavor to average the whole thing.

The CHAIRMAN: That has been my thought since I first began consideration of the subject last spring. Now, do you think of any other agencies? It occurred to me that perhaps the commercial clubs in various communities might be helpful, or the farm organizations.

Mr. BISSELL: It is possible that some of the granges and other farm organizations might help. They have not, so far as I know. There are some men in the room who probably know more about that than I do, but I doubt if they have at the present time any reliable machinery for securing statistics.

The CHAIRMAN: But you think these various instrumentalities should cooperate and that there should be a compilation of the data made which would be useful to these organizations that want to carry on this line of insurance?

Mr. BISSELL: Yes; I do not see what else the Government could do. The only other thing the Government could do would be to subsidize the farmers.

The CHAIRMAN: Well, we have just turned down a ship subsidy bill, and I do not think we will start on this.

Take the wheat crop in the eastern part of Kansas where they have sufficient moisture and let us have your idea about a reasonable rate.

Mr. BISSELL: We can assume in eastern Kansas land is worth \$150 an acre, and that the average crop is about 18 bushels an acre. We would have probably an outlay on that crop of somewhere in the neighborhood of \$10. Seventeen dollars and fifty cents would be a rough estimate of the total cost of the crop. Now, the price of wheat there has run in the last six months to the farmer from 90 cents to \$1.20. At \$1.10 it would bring him \$19.80, which means only a balance of \$2.30 an acre net profit. I should say that from the way we are looking at this thing now I doubt very much if we should want to give him to exceed, at the outside figure, \$10 an acre insurance,

and I should prefer to hold it lower; I should prefer to hold it down to about \$7.50, an acre. When I say "the outside figure," that would mean where inspection would show his farm to be rather above the average.

The CHAIRMAN. What would be the rate to be charged for the risk?

Mr. BISSELL. I have not that in mind at all. Of course, our own experience is probably of no use to us because our losses have been so enormous owing to extraneous causes, you might say, that we have not any very reliable data. In that section of Kansas, from the best investigation we could make, the average rate ought to be about 5 cents. Now, it might be that in going over those figures we might change our ideas on that proposition.

The CHAIRMAN. Then, the insurance premium would be around \$45 to \$50 per acre?

Mr. BISSELL. Yes; something of that sort.

The CHAIRMAN. Do you insure fruit out on the far Pacific coast?

Mr. BISSELL. We are beginning to. We have two or three contracts under negotiation at this moment.

The CHAIRMAN. You have not made them?

Mr. BISSELL. At least one we have made.

The CHAIRMAN. Would you mind telling us the terms?

Mr. BISSELL. Will you state the terms, Mr. Thompson?

Mr. S. M. THOMPSON. This is in relation to an association which buys and contracts for fruit and advances money to the grower.

The CHAIRMAN. A cooperative organization?

Mr. THOMPSON. No; it is not; it is a private organization.

The CHAIRMAN. What is the name of the organization?

Mr. THOMPSON. The Associated Fruit Co.

The CHAIRMAN. Where is it located, in Washington?

Mr. THOMPSON. No; their headquarters are in Chicago. But we were merely under negotiation at that time and that contract was never entirely closed.

Mr. BISSELL. Is there not one that we have closed?

Mr. THOMPSON. Not that I know of.

Mr. BISSELL. I was told last night that one of these had been closed. We have two or three under negotiation. May I have three or four more minutes, Mr. Chairman?

The CHAIRMAN. Yes; take all the time you want. Come back to-morrow, if you desire.

Mr. BISSELL. There was one thing I overlooked. The most immediate feasible proposals for crop insurance are of the nature that Mr. Thompson has just spoken of, where we can deal either with a cooperative association or with a fertilizer or a large commission consignment firm or selling agency which handles the crops of a great many individuals. There are average figures of some use to us. There we can talk average rates and be on a more or less firm ground. When we talk with the individual the average rate means little or nothing, because his farm or orchard is not like any other in the district. But when we can talk with a hundred farmers, or, perhaps, two or three thousand, then we are talking average. Furthermore, we deal with those people on the basis of their whole production, and the individual farmer, except by some arrangement with the dealer, or with the man we negotiate with, is not protected by us. We protect this cooperative association against a loss in excess of what we must expect every year over its entire field of operation.

The CHAIRMAN. You deal with the organization and they in turn deal with the members?

Mr. BISSELL. Yes.

The CHAIRMAN. Those cooperative organizations are highly developed and numerous in numbers along the Pacific coast, especially in the fruit and vegetable lines?

Mr. BISSELL. Yes; very.

The CHAIRMAN. I think they are spreading throughout the South and many are found in the New England States, but they are fewer in numbers in the wheat-growing State. I can see the advantage of dealing with those organizations.

Mr. BISSELL. We can make a much lower rate by that means. We can grant a larger portion of insurance and we can make a lower rate because we get the spread. We get the good and the bad; we get everybody in the association, and as a matter of fact, thus far I think it is fair to say that, with some very conspicuous exceptions, on the whole the class of farmers which go into those associations constitute the better class of farmers. I speak of this with a good deal of authority in a way because we have just closed a deal with the Connecticut Valley Tobacco Association, a new organization of this kind which I think goes into your State, Senator Keyes.

Senator KEYES. The very southern part of the State raises some tobacco, yes.

Mr. BISSELL. There we deal with the whole tobacco association. We can not at present insure them against the broad crop covering, but we are insuring them against hail.

As an example of what can be done, the hail in the Connecticut Valley with respect to tobacco, which is a specialized kind of tobacco, being a wrapper tobacco used on the outside of cigars and required to be perfect, makes a big difference in the value of the leaf. It is therefore about as susceptible as anything in the world to hail damage, and the experience on it has been pretty bad. Our company has been the leading company in that, and, in fact, for the last two years we have been the only company who has insured it. We have done it in cooperation with the farmers and the bankers, and last year we found it necessary to put our rate up to 16 per cent. We had a meeting in our office of the principal farmers to talk to them about it, and they all agreed that that figure was necessary, but what it really meant was that only farmers who were more or less regularly inflicted with hail required such a rate.

This year we have a contract with the association to insure not less than 80 per cent of their growers from Connecticut to Kentucky. Nobody knows what we are going to get from the spread because there are absolutely no statistics from the damage to these people who never insured. They say, "We are immune." Of course, they are not. Hail sweeps off to one side and damages somebody who has not had hail for five years. But they feel that they are in the more favorable part of the valley.

We have made the same bold assumption that if they all come in we can afford to cut that rate in two. The district is not large and very frequently the hailstorms go from one end of it to the other. It is not as though we had the whole wide expanse of Nebraska or North Dakota or Kansas to deal with. We have a small valley. But we have done that on the basis of not less than 80 per cent of all their growers coming in.

Furthermore, we are going to separate our losses with the association and they are going to pay us the premium. We have cut the expense down to a nominal figure.

Senator KEYES. Mr. Bissell, your experience in crop insurance that you are carrying on now with respect to apples and potatoes, and so forth, ought to be of great assistance, ought it not, in developing the insurance of major crops?

Mr. BISSELL. I think it should. The volume of it as yet is not large enough to enable us to draw any very conclusive theories from it, but it is growing every year, and the longer we do it and the more of it we do the more we will be warranted in drawing conclusions.

The CHAIRMAN. Would you be willing to have placed in the record a statement of the contract you have made with the cooperative organization out in the West?

Mr. BISSELL. Yes; at least, I would be very willing, indeed, for the committee to have it. In these specialized matters we, of course, are in a competitive business.

The CHAIRMAN. I do not ask for terms or rates, or anything of that sort, but the general plan of how you deal with the cooperative organizations, what you are covering, and the risks taken and the causes of the damages. You would not care anything about that, would you?

Mr. BISSELL. No; I would be glad to put that in the record. In almost every one of these cooperative organizations the cost varies. The man in Florida, for instance, is particularly interested in frost. He knows that if he does not have frost his crop is pretty well assured. He knows if he gets more than frost covering he has to pay more than the frost is worth.

The CHAIRMAN. Mr. Bissell, are you familiar with the terms of an insurance contract you have covering a thousand acres of potatoes in the South?

Mr. BISSELL. No; but Mr. Thompson is. Did you draw that contract, Mr. Thompson?

Mr. THOMPSON. Yes.

Mr. BISSELL. Well, that information is here, Mr. Chairman.

The CHAIRMAN. We would be delighted to have you make any further observations, Mr. Bissell, that you have in mind.

Mr. BISSELL. I do not think there is anything further. I hope I made it clear at the outset that as a business proposition we think of crop insurance and hail insurance as two entirely different things. The ideal crop policy ought to include hail and damage, no doubt; but in considering it from the insurance point of view we have always considered hail insurance as a specific measuring thing and not subject to the same consideration as we would give to a general crop policy.

The CHAIRMAN. Will you be here the rest of the day?

Mr. BISSELL. I shall have to leave at 4 o'clock, Mr. Chairman.

The CHAIRMAN. The committee is obliged to you, Mr. Bissell, for your statements. Mr. Bissell. I should be glad, either by correspondence or later on when the committee is deliberating these affairs, if the discussion of anything would be of service, to come down and meet the committee.

The CHAIRMAN. Thank you. We shall have to report to Congress, according to the resolution, I think, early next session, and I think we would be glad to have Mr. Bissell and other students of the problem and farm organizations sit in with us and the Department of Agriculture and work out possibly some legislation that would amplify the work now being done by the department. Senator Smith, the Democratic member from South Carolina, was unfortunate enough not to be able to be present yesterday or to-day. He will, perhaps, be here this evening. Of course, he will have the advantage of the record and will read it. At that time I think we will take advantage of your offer and have you join us.

Mr. BISSSELL. All right, sir, I shall be glad to do anything I can.

The CHAIRMAN. Whom do you suggest to follow you now, Mr. Bissell?

Mr. BISSSELL. Mr. Thompson. Mr. Thompson was formerly connected with the Department of Agriculture, and we hired him from them when we were making our preliminary investigation. He is now in charge with what crop business we do in the Southern States and what hail insurance and what rain insurance we have done down there.

STATEMENT OF MR. S. M. THOMPSON, OF THE HARTFORD FIRE & GUARANTY INSURANCE CO., HARTFORD, CONN.

The CHAIRMAN. How long were you with the Department of Agriculture, Mr. Thompson?

Mr. THOMPSON. Six years. I was with the office of Farm Management and Farm Economics for three years and Crop Estimates for three years.

The CHAIRMAN. All under the head of Agricultural Economics now?

Mr. THOMPSON. Yes.

The CHAIRMAN. How long have you been with the insurance company?

Mr. THOMPSON. This will be the fourth year. I went with them on April 15 three years ago.

The CHAIRMAN. Particularly, what is your line of work with the insurance company?

Mr. THOMPSON. Well, it has been an attempt to develop this crop insurance. We have studied it in every way possible, both through experience and in using all the theory we could get by utilizing the Department of Agriculture figures and other figures. I had access to all department records and knew where to find them, because I had helped work them up in some cases.

I was on cost-production study for three years, mostly in the Northwest. We always found that the average which we secured, although the average might be fairly correct in using this as a basis of insurance, it was altogether inadequate, because it did not take into consideration the departure from the average which made up the general average. That is a very vital factor in determining both your rate and your loss. That has been our greatest problem.

I have set down just a few notes this morning that will cover the major difficulties we have been up against and the deductions which we have made from past experience:

1. The demand for general crop insurance is in areas subject to violent seasonal fluctuation, both in yield and market price. These seasonal fluctuations are normal and expected in the dry or semiarid regions, and the business of farming is built up on the assumption that there will always be years of crop failure, in some sections two or three years out of five.

To attempt to insure investment each year in these areas would require a prohibitive rate and is out of the question. Insuring in such districts on average return for five years might be feasible if the moral hazard could be eliminated.

2. The personal equation enters strongly into general crop insurance, not only from the moral standpoint but from the standpoint of ability as well.

3. Crop averages or other Government data which we have available do not take into consideration the violent fluctuations which make up this average; in other words, the number of individual crop failures or near crop failures in any community or county due to the personal element has been measured and is extremely difficult to arrive at.

Experience has proved that fluctuations between various individuals is so great in the same area that in order to protect the individual farmer at a reasonable rate the amount of insurance must be held at such a point that it fails to interest the good grower.

4. General crop insurance, therefore, unless compulsory will always result in the selection of the worst risk, and since average yields are made up of high and low yields it is the departure from the average which determines the loss ratio. In other words, the average of an eastern county might be 20 bushels of wheat and the average of a

western county 20 bushels. If they were both insured for \$10 per acre at a premium cost of 5 per cent, or 50 cents per acre, the loss ratio might easily be 50 per cent in the eastern county and 500 per cent in the western county, and the average yield for each county remain 20 bushels. Seasonal and individual fluctuations do this without affecting the average.

The CHAIRMAN. What do you mean by "compulsory insurance"?

Mr. THOMPSON. Take an association, for instance; they might tell all the members that they had to contribute and they would take that out of the selling charges.

The CHAIRMAN. You are speaking of cooperative organizations and groups of farmers now?

Mr. THOMPSON. Yes.

5. All present available data are altogether inadequate to determine, therefore, any basis of measuring the personal equation which is the most important factor of all to consider when arriving at a safe basis to insure the individual farmer.

6. When the motive of buying crop insurance is one to obtain credit only, and when the amount of insurance is held to the actual cash outlay or cash advance to the grower, crop insurance outside of the semiarid regions might prove feasible. We say "might," because without careful underwriting regarding the character or ability of the individual it could not even then prove feasible.

7. Crop insurance is a much more feasible proposition when it is removed from the individual basis. In other words, where the agency underwriting the business can secure the advantage or benefit of an average both of good and bad individuals and be responsible only to a central organization like a cooperative association, crop policies may be issued with some chance of success. In such a case, however, the individual is not protected other than to the extent that the community is protected against general crop failure or a calamity, since all crops of this association are averaged under one policy.

8. When a specific crop hazard is insured against, it must be one from which the average is clearly apparent. Hail, and in some cases frost and tornado, can be determined this way. The major crop hazards, however, such as drought, excess moisture, insects, and disease, can not be accurately measured, nor can they be separated from losses caused by neglect. To cover losses from such causes, therefore, will always require that so small an amount of insurance be allowed that any chance of willful neglect will be eliminated, or better yet, that the individual himself be not insured but only the community as a whole working through an association.

That is just a sort of a summary of the experience.

The CHAIRMAN. How would you classify the principal crop losses? Have you ever made a study of that subject, Mr. Thompson?

Mr. THOMPSON. It would depend altogether upon the class of the crop. With fruit the major crop losses are from frost. The second would be from bad weather during pollination season. In the case of cotton the major crop loss is from the boll weevil. In the case of vegetables the principal crop loss is caused, as in the case of potatoes particularly, by fungus diseases, in some cases frost, depending on the locality. In the case of tobacco, like wrapper tobacco, the big hazard is hail. With general crops like wheat and corn I should say that the great hazard is unfavorable weather, either cold, too much rain, or drought. Those things determine pretty largely the extent of the crop.

The CHAIRMAN. And hot winds?

Mr. THOMPSON. And hot winds; yes. It depends very much on the class of the crop, and we try to take that into consideration, of course. In the irrigated regions they are practically certain of making a crop unless some specific thing intervenes, like frost, and they are also sure of regulating the water supply.

The CHAIRMAN. Has your company entered the intermountain States with any of these contracts?

Mr. THOMPSON. Not to any extent.

The CHAIRMAN. You have no insurance on alfalfa or sugar beets or anything of that kind?

Mr. THOMPSON. No.

The CHAIRMAN. Some time ago Mr. Denny, of Denny & Co., Chicago, wrote me about an insurance contract on a thousand acres of potatoes this year grown in the South. I will read a paragraph of that letter and you may be able to dilate upon it.

"In reference to the insurance on the 1,000 acres of potatoes, to which we refer in our previous letter, the advance we made to growers is approximately \$50 per acre, which covers feed, fertilizer, spray material furnished, and other incidentals, and for these advances we secured a policy from the Hartford Fire & Guaranty Co. that these crops would sell for an amount sufficient to cover. The additional cost of producing crop, the labor and use of land amounts to \$30 to \$35 per acre. In other words, had

there been a total destruction of the crop, the grower would have been out his labor and the use of his land. The insurance covers everything except fraud. If the grower defrauded us, the company was not liable."

Now, do you carry much insurance of that kind, which seems to have been given not to the grower, but to those who advanced to the grower certain moneys to cover the cost of cultivation, including fertilizer, etc.?

Mr. THOMPSON. Yes; that is practically the kind of insurance we carry now in the South, either with reliable people like Denny & Co., who are very reliable, or with associations, cooperative associations, who, of course, are made up of the farmers themselves. They take care of their own insurance if the total does come not up to what we insure for.

As a specific example, we have a little association at Bullitfield, Ga., composed of truck growers which we insured. They are trying to diversify and get around this one crop farming business down there. They are growing a little cotton, wheat, and corn, and watermelons, quite a big crop of watermelons, which are speculative in the extreme. They had to raise \$15,000 to pay for the fertilizer and various other cash advances for these growers. To get credit it was necessary to secure it and we issued a policy for this \$15,000 which they had to borrow. We are covered against loss if all the crops under this contract at the end of the season are valued at \$15,000. I may say we do not consider that the market hazard enters in there because the amounts of insurance are so low that there is only protection against crop failure. That is all they wanted, in addition to calamity insurance.

The CHAIRMAN. Does your company send men out among the farmers in an effort to sell this insurance like the life insurance companies do?

Mr. THOMPSON. No; we do not. We have a few specialized crop men who on these policies always go there when an application comes in and look the situation over and arrive at it with the parties interested.

The CHAIRMAN. Does the application have to be forwarded to the principal office of the company?

Mr. THOMPSON. Yes; it has to be forwarded to Atlanta before the policy is issued, but if it is approved by our field men we practically always issue the policy.

The CHAIRMAN. Then, you are not making any effort to extend your business?

Mr. THOMPSON. No determined effort. It extends itself enough by just looking after what comes for it.

The CHAIRMAN. Have you found insurance on cotton profitable from the company's standpoint?

Mr. THOMPSON. No; not to date. Insurance on cotton, as a matter of fact, we do not write any more except in a very small way where it enters in with the watermelons and all other crops. The cotton losses would not be adjusted separately. As far as insuring cotton itself is concerned, we do not insure it because it is too hazardous under present conditions. We could not possibly afford to do it.

The CHAIRMAN. What do you find the most reliable product that can be covered? What product is freer, you might say, from the natural hazards of the elements?

Mr. THOMPSON. Well, I should say that grain in the East and South is probably about the surest crop you could imagine, corn and wheat; but they do not care for insurance on those things, of course. You could not sell a policy on corn or wheat in our territory unless you go away out in Texas.

The CHAIRMAN. Could you sell it in Maryland?

Mr. THOMPSON. No; you could not sell it in Maryland; that is, to give a reasonable amount of insurance. Of course, crops where there is a lot of money tied up want and desire insurance. It is usually not the farmer who is so much worried about what is going to happen; it is the man who loans money to the farmer who is worried. The farmer is a man who is used to taking his chances. You could not do much by going out and trying to sell the individual farmer crop insurance. It is the credit organizations which demand it.

The CHAIRMAN. Does your company make any difference between the tenant and the landlord in regard to selling insurance?

Mr. THOMPSON. Yes and no. If the tenant is of good character and we are satisfied that it is a good risk, we do not care whether he is a tenant or an owner; but as a general rule in the South a tenant farmer as such is not so reliable. Of course, the condition down there is largely such that the landowner is probably a fairly well-to-do man who has a lot of little patches farmed out to Negro tenants, and it is the whole on which he depends. We would not deal with a small individual tenant, because we could not keep track of it. It is too much expense. But where we can get a large average and take advantage of the average, where we do not have to think about the fluctuation all the time, we believe we are working something out.

The CHAIRMAN. Does that conclude your statement, Mr. Thompson?

Mr. THOMPSON. I think so.

The CHAIRMAN. We are obliged to you. We will take a recess now to meet again at 2.30.

(Thereupon, at 12.30 o'clock p. m., the committee took a recess until 2.30 o'clock p. m.)

AFTERNOON SESSION.

The committee reassembled pursuant to the taking of the noon recess at 2.30 o'clock p. m.

The CHAIRMAN. The committee will be in order.

We will now hear Mr. James B. Cullison.

STATEMENT OF MR. JAMES B. CULLISON, JR.

The CHAIRMAN. Give your full name to the reporter, will you, and your address and occupation?

Mr. CULLISON. My name is James B. Cullison, jr.; home office address, 209 West Jackson Boulevard, Chicago, Ill.

I have been engaged in the hail business since 1913. At present, and for the three years last past, I have been manager of the hail department for the Insurance Company of Philadelphia; the Aetna Insurance Co., of Hartford; the Springfield Fire & Marine Insurance Co., of Springfield, Mass.; and the National Security Fire Insurance Co., of Nebraska.

Our department office is at Chicago, the same address as mine, and we maintain branch offices at some seven or eight points in the United States. We are now operating our hail department in 20 States in the United States and three Provinces in Canada.

The CHAIRMAN. In what States do you operate?

Mr. CULLISON. The Mississippi Valley States. I can name them if you wish.

The CHAIRMAN. No; that is all right.

Mr. CULLISON. I am directed by my company officers to state that we are very much interested in crop insurance, and it is our desire to cooperate with the committee and with the Government in every manner possible toward solving this question if we can.

I greatly appreciate the opportunity to have heard the remarks made here in this investigation, and I do not think I can add any to the information given. The others have practically covered the subject.

I feel this way, that if there are any questions you would like to ask I would be very glad to answer them if I can.

The CHAIRMAN. Mr. Bissell, do you wish to ask any questions?

Mr. BISELL. You have been doing some investigation in at least one of those companies on this matter of general crop coverage, have you not?

Mr. CULLISON. For at least seven years I have been gathering all of the published documents of the Weather Bureau, Agricultural Department, especially the Bureau of Crop Statistics, and of the different States, with the idea in mind of eventually using that information in determining, if possible, if it is feasible to write crop insurance.

For the present time and for two years past we have some four or five men who have been touring the United States supplementing this information, and we are just at this time about ready to tabulate that information and try to analyze it, if possible, at least a few States. In fact, we have made a preliminary survey in the State of Kansas and tabulated a few counties.

We now write frost insurance on citrus crops in Florida and California. We expect to continue this investigation and, if possible, take on other lines if we believe it can be made.

The CHAIRMAN. Have you made comparisons between the data collected by you and the reports from the Department of Agriculture?

Mr. CULLISON. Yes, sir.

The CHAIRMAN. Discuss that subject, will you?

Mr. CULLISON. I would like to state there that I consider the work being done by the United States Government as very valuable. We work in cooperation with them in every manner possible and we have found them very willing to give us all the information they have, and we consider it quite reliable in so far as generalities go.

The only suggestion that I can make in regard to the department work is that it does not go into detail. I mean by that that their statistics are always made up as applying to individual States or to the nation at large, and we find that conditions are so varying between particular sections of the individual States that the informa-

tion given by the department is not of much value in trying to determine a rate or the hazard that exists in given counties or townships or sections of the State. It is not the department's fault at all. They have not, as I understand it, the funds or the men to go into this detailed work.

Mr. BISSELL. I think the committee would be interested in those figures you showed me this morning showing the ratio of destruction by hail.

Mr. CULLISON. Of course, so far as hail business is concerned, we have given that a great deal of thought and have kept statistics for a number of years.

In speaking of generalities, I think I can best illustrate that by saying that the department in one of its bulletins, volume 6, No. 8, of the Crop Reporter for August, 1920, in giving the per cent of damage from different causes to the crops of the United States shows the 10-year average loss from hail to wheat for the period from 1909 to 1919, inclusive, as 1.1 per cent.

It is impossible for us to get absolute statistics in regard to hail losses. It is a competitive business and there are now about 75 companies engaged in the hail business, and these figures are not turned in to any central station or clearing house for all companies; but from various sources I gather statistics from year to year and try to keep them up to date, and from my personal records I find that for the period from 1915 to 1922, inclusive, the average hail loss from my figures, that is, loss cost, the per cent of damage by hail is 4.86 per cent.

The CHAIRMAN. Mr. Cullison, is that based on the total crop damage?

Mr. CULLISON. That is based on actual liability that we have carried.

The CHAIRMAN. Well, I might state that I have the figures that you have mentioned, and that 1.1 must be read in connection with the total crop damage from all causes, which they place at 28.77 per cent of the crop yield. That is not based upon the 100 per cent of the crop which the hail attacks; it is that percentage which is considered in connection with the total crop damage as 28 per cent of the crops.

Mr. CULLISON. If the Senator will permit me, I do not know that I have the right view of that, but I think I have. As I understand it, the figures made by the Bureau of Crop Statistics are applied to what they term a normal or 100 per cent crop. By normal, as I understand it, they mean a crop which would be a perfect crop for the given locality or given section were all conditions perfect. That being the case, if that is true, why the percentage they speak of is based on a normal crop or perfect 100 per cent crop.

The CHAIRMAN. Well, let us get clear in the record. It means a great deal in the way of percentage, the difference between 1.1 and 4.86.

Mr. CULLISON. If the Senator please, I think I can explain that to your satisfaction.

The CHAIRMAN. Well, do so.

Mr. CULLISON. We know, of course, that we do not write hail insurance on all of the crops. Our business is limited to that section of the country where hail is considered by the growers as a hazard of sufficient seriousness that they should protect themselves against it. The point I am trying to show there is this, that perhaps the Government report as to the hail damage to all of the wheat crop in the United States is somewhere near correct, as nearly as it can be estimated. On the other hand, there are so many other factors that enter into the making of rates or predicating rates which will produce a premium income sufficient to pay losses and expenses and all other costs of carrying insurance, that we can not take the department's figures alone to predicate a rate on. I think you can see that.

The CHAIRMAN. I see that, but that does not reach the point which I have in mind. I have before me statistics of the Department of Agriculture which show loss due to hail 1.1 per cent, which you mention. Then you started out by saying from your investigation it ought to be 4.86 per cent.

Mr. CULLISON. That is from actual business which we carried.

The CHAIRMAN. Now, I think your basis of 4.86 per cent is on an entirely different basis than the 1.1 per cent of the Department of Agriculture.

Mr. CULLISON. No question about that.

The CHAIRMAN. I want the record to show it. So you are not comparing 1.1 with 4.86 per cent. The 1.1 per cent is based upon the proportionate destruction by hail of the whole of the crop damage, which is 28 per cent. That is what this means. They go upon the theory that of all the 10 leading crops 28 per cent is destroyed annually over a period of 10 years that they have kept the figures, which is a little over one-fourth of the total crop, and of that destruction hail's proportion is 1.1 per cent of the 28 per cent.

Is that not right, Mr. Valgren?

Mr. CULLISON. I understand that.

Mr. VALGREN. I think not, Senator.

The CHAIRMAN. That is the way I read the statistics. I do not pretend to be right, and if I am wrong I want the record made correct. I do not want any dis-

crepancy in the record between the figure given by Mr. Cullison and those by the department.

Mr. CULLISON. I think if you add these items you would find that some of them make the 28 per cent.

The CHAIRMAN. I do not want to be misgoverned in the matter and I do not want anyone who may read the record to be misgoverned.

Mr. VALGREN. I take this statement from this article of yours to which we made reference yesterday, the Journal of Insurance and Financial Statistics, volume 4, page 33. Now let me read it:

"Taking wheat as an example, it was found that on a percentage basis covering the United States as a whole the average annual crop damage from the various causes during the decade 1909 to 1918, inclusive, was as follows: Deficient moisture, 12.38 per cent; excessive moisture, 2.03 per cent; floods, 0.33 per cent; frost, 0.7 per cent; hail, 1.1 per cent; hot winds, 2.02 per cent; storms, 0.26 per cent; animal pests, 0.19 per cent; other and unknown causes, 0.86 per cent. Total crop damage from all causes, 28.77 per cent."

That means, Senator McNary, as I understand it, and I intended it to mean when I wrote it, a percentage in all cases of a total or no-damage crop which the department arrived at by increasing the normal crop that the crop reporters have in mind by 10 per cent, on the assumption that the crop that the crop reporter has in mind when he reports is not, after all, a perfect or no-damage crop, but such a crop as frequently occurs over reasonably large areas in his territory, and those percentages are intended to be percentages of a perfect or no-damage crop as nearly as the department can arrive at it.

The CHAIRMAN. And not the proportion of the damage from all causes?

Mr. VALGREN. No, sir.

The CHAIRMAN. Very well, I am glad to know that. I read it the other way.

You may proceed, Mr. Cullison.

Mr. CULLISON. I am not attempting to discount the department's report there, because I believe that figure is somewhere near correct.

The CHAIRMAN. One and one-tenth per cent?

Mr. CULLISON. Yes, sir; as to hail damage to the entire wheat crop in the United States. But nevertheless, should we attempt to predicate rates on that, and assuming that we know nothing whatever about the hail hazard but are starting in a new business, we would have fared very badly had we predicated rates on that basis.

If the committee cares for it, I can give you my statement as to hail damage in particular States.

The CHAIRMAN. I think it would be well to have it in the record.

Mr. CULLISON. Iowa, 2.11. That means per cent.

The CHAIRMAN. I see, on the basis of 100 per cent.

Mr. CULLISON. Yes, sir. Kansas, 4.02 per cent; Minnesota, 2.85 per cent; Missouri, 0.79; Montana, 6.05; Nebraska, 5.43; New Mexico, 7.35; North Dakota, 6.96; Ohio, 0.346; Oklahoma, 4.55; South Dakota, 4.32; Wisconsin, 1.73; Wyoming, 10.68.

Mr. BISSELL. Did you mention Colorado?

Mr. CULLISON. I do not have Colorado.

The CHAIRMAN. What number of years is represented in that table?

Mr. CULLISON. As I explained, these figures are not absolute; merely figures that I have gathered from various reports that I could get, State averages and published reports in insurance publications.

The CHAIRMAN. What years do they cover?

Mr. CULLISON. They cover the years 1915 to 1922 inclusive.

Mr. BISSELL. I might say, if you will permit me to interrupt, that now almost every State requires the insurance companies doing business in the State to report the amount of hail business that they write each year in the State and the amount of losses thereon, and that, I presume, Mr. Cullison has gotten a great many of his figures from that, is from those sources, by going to the different State records and having them compiled. Of course, they do not separate the crops in most States. It is impossible to do that.

The CHAIRMAN. I wanted to ask Mr. Griffin, of the Northwestern Fire & Marine Insurance Co., a question.

You have heard the reading of these statistics. Mr. Griffin?

Mr. GRIFFIN. Yes, sir.

The CHAIRMAN. Has your company collated data of this character?

Mr. GRIFFIN. Yes; over a long period of years—22 years.

The CHAIRMAN. You heard these figures covering various States?

Mr. GRIFFIN. Yes, sir.

The CHAIRMAN. Do those figures about conform to your experience?

Mr. GRIFFIN. That will be about right; they run pretty true to form.
Mr. CULLISON. May I explain a little there, that this represents purely the loss cost, as we call it, the actual hail per cent of loss, and does not include any loading for expenses or any other item; merely the loss cost.

The CHAIRMAN. How long has your company been engaged in selling insurance to citrus fruit growers?

Mr. CULLISON. In Florida, two years; in California last year only.

The CHAIRMAN. What has been your experience from the standpoint of whether it is good business or not?

Mr. CULLISON. Well, we have had no losses at all as yet.

Mr. BISSELL. It is a feast or a famine.

Mr. CULLISON. We are living in constant fear. Last year we sat up in February all one night to watch the weather reports.

The CHAIRMAN. Would you be willing to give me the rate charged for the risk assumed?

Mr. CULLISON. I would have to guess at that. As I remember it, it runs from 6 to 10 per cent in Florida.

The CHAIRMAN. About the same rate as the hail insurance?

Mr. CULLISON. Yes, sir; it would average, I would say, about 8 per cent.

I might give you a little history of how we went at it to determine those rates, if that would be interesting to you.

The CHAIRMAN. It would be, indeed.

Mr. CULLISON. A man spent practically one year visiting in the State of Florida practically all weather stations, collecting their data as to frequency of frosts or freezes which would destroy fruit. He had at his disposal complete records of the Florida Citrus Exchange, which controls about 75 per cent of the production of the State; he also visited growers and asked them questions and made out questionnaires; not only the growers themselves and examined their books, but even talked to the negroes who were attending the crops; he also had all the agricultural college information and the information of the department of the State that he could get.

After that was all gathered, why, then it was analyzed and diagramed and compared, and from that we tried to determine what we thought the rate ought to be. Whether we have guessed it right or not we do not know.

The CHAIRMAN. That further involves the proposition that before crop insurance generally can be had, and before it is a practicable business, long studies over periods and cycles of time must be made, and observations must be made.

Mr. CULLISON. Yes.

Senator KEYES. Can you tell about what percentage of the crop in Florida carries insurance?

Mr. CULLISON. I can only guess at that. It was represented to us that there was a possibility of writing \$29,000,000 of liability in the State of Florida. Our first commitment there was only \$300,000. That is all we cared to accept.

The CHAIRMAN. Have you increased it in the last year?

Mr. CULLISON. Yes, sir; we raised it last year to \$666,000.

The CHAIRMAN. And that has been satisfactory?

Mr. CULLISON. Yes, sir; that is only two years, and we will either make money practically every year or have a total loss. There has been one total loss in 85 years in Florida.

Mr. BISSELL. And a great many partial losses?

Mr. CULLISON. Yes; a great many partial losses.

The CHAIRMAN. Do you insure against every conceivable damage to fruit?

Mr. CULLISON. No, sir; frost only.

The CHAIRMAN. Just frost?

Mr. CULLISON. Yes, sir; or hail. We carry hail insurance, of course.

The CHAIRMAN. I mean down here in the citrus fruit country. You do not carry hail there.

Mr. CULLISON. Just frost. There is no demand for hail insurance.

The CHAIRMAN. And no other form of loss?

Mr. CULLISON. No, sir.

The CHAIRMAN. It may be aside from the question, but it is a matter of protection—do they smudge in the orchards in Florida?

Mr. CULLISON. Very little. We tried to work out some method of giving credit for that, but the practice there is not extensive, and they let the smudge pots rust and go to waste, and we did not consider that worth while.

The CHAIRMAN. Smudging is widely practiced in California.

Mr. CULLISON. Yes, sir.

The CHAIRMAN. What do you think Congress can or should do to help along in this matter?

Mr. CULLISON. I am very anxious to see Congress give the department sufficient appropriation so that they can carry out in more detail the examination of this matter.

In the State of Oklahoma several years ago they passed a law requiring the county assessors—in fact, the township assessors—to make out a questionnaire for every farm, or every acre of tillable land in their districts, and that was then tabulated by township; that is, 6 miles square, Government survey, in that country; then the townships were tabulated by the county clerk or assessor; then that was forwarded to the State department, where the State totaled it up.

I believed at the time, and believe now, that had that been carried out, it would have given us information of very great value, but they found it was very expensive. In some counties they found that the reports were of very little value. In fact, some counties failed to return any reports at all. So if that system is taken up it must be taken up under the supervision of trained experts who know what they want, and some method must be provided to force them to get it.

I believe the United States Government could go into that in cooperation with the States, put their men in charge, perhaps through the county agents; they could educate these assessors until that information could be gotten in such shape that it would be very valuable.

I think we should have not less than a 10-year record to give us any information of any value, and in some of the western country perhaps it would take a longer time than that.

If you care to listen, I could give you a little explanation of a comparison between two counties in Kansas.

The CHAIRMAN. Do so.

Mr. CULLISON. This follows largely the illustration given by Mr. Thompson this morning. This is merely to show the fluctuation in acreage and abandonment as between a county in what we call hazardous territory and in one which we call reasonably sure crop section. The State of Kansas gives a sample of pretty nearly all kinds of weather. The eastern section is reasonably certain; it is in an altitude of perhaps 800 to 1,200 feet, while 400 miles west it reaches an altitude of 3,500 feet and comes into what we call the semiarid district.

In Thomas County, Kans., the Government crop estimate—and this may have been corrected by our field men going to the county records—shows that in 1911 the acreage of winter wheat sown was 184,000, and there was a total abandonment of the crop that year. In 1912—

Mr. BISSELL (interposing). A total crop failure?

Mr. CULLISON. Yes, sir; that is the winter wheat. In 1912 there were 152,000 acres sown and 94,000 acres abandoned.

In 1913 there were 118,000 acres sown and 44,000 acres abandoned.

In 1914 there were 122,000 acres sown and no abandonment.

That is merely to show the fluctuation of abandonment in that country.

The CHAIRMAN. What was the cause of the abandonment?

Mr. CULLISON. Well, I could not answer that question here, but I would say in that county, as I remember it, it was practically all dry weather.

Now, take an eastern county, Reno County, Kans., for the same period of time.

In 1911 there were 202,000 acres sown and 12,000 acres abandoned.

In 1912 there were 235,000 acres sown and 14,000 acres abandoned.

In 1913 there were 247,000 acres sown and 8,000 acres abandoned.

In 1914 there were 304,000 acres sown and no abandonment.

In 1915 there were 325,000 acres sown and 64,000 acres abandoned.

You will notice there that there is a wide difference in the abandonment between those two counties. In other words, that Reno County is practically certain of a crop over that five-year period.

Resorting to the average yield per acre, the 10-year average in Reno County is 14 bushels per acre, while in Thomas County it is 12.5 bushels per acre.

Mr. BISSELL. Is that acres reaped or acres sown?

Mr. CULLISON. Acres harvested.

If there was an attempt made to make rates on those figures, you can readily see that in Thomas County the loss would be considerable, while in Reno County the plan might work. In other words, it might produce a premium income that would cover the losses.

The CHAIRMAN. Do you think that your insurance could be distributed over a wide area, so that those counties that were more certain to produce a crop would carry those which were less likely to produce a full crop?

Mr. CULLISON. I can only answer that by saying that for five years I have been trying to figure out some plan to do that.

The CHAIRMAN. The Secretary of Agriculture, if you remember, stated yesterday that he thought it should be distributed over a large area so that the losses in one

community would be absorbed by another, and vice versa, and that over a period of years it would equalize itself and form a perfect balance. Does your company proceed along that line, or has it tried to work out something along that line?

Mr. CULLISON. Yes, sir.

The CHAIRMAN. Have you been successful?

Mr. CULLISON. We have not; we have not arrived at any conclusion that we think is workable. You see, we have no way of taking advantage of over production, and the reason for that is this, as has been stated here by other men who have been giving information, that we must deal with individual farmers and there are very few of them who can give you an accurate record, and our experience has been that farmers in demanding insurance want insurance against that specific hazard which they fear. In other words, we have to sell insurance to the farmer. They do not come in after it unless they think they stand a sure chance to lose.

The CHAIRMAN. Your companies have profited by this insurance as long as they have carried it?

Mr. CULLISON. Yes, sir; a very small profit. We have not made earnings sufficient to put anything into a surplus.

The CHAIRMAN. But you are willing to extend your contracts to cover losses from other causes if you have the data upon which to act?

Mr. CULLISON. We are very anxious to do so; yes, sir.

The CHAIRMAN. Do you think of anything else, Senator?

Senator KEYES. No.

The CHAIRMAN. Thank you very much, Mr. Cullison. Your testimony has been interesting.

Do you want Mr. Johnson called, Mr. Bissell?

Mr. BISSSELL. Yes, sir; Senator.

STATEMENT OF MR. H. W. JOHNSON.

The CHAIRMAN. Mr. Johnson, for the sake of the record, will you give your name, your address, the line of work in which you are engaged, and whom you represent?

Mr. JOHNSON. H. W. Johnson, Ottawa, Franklin County, Kans., an insurance agent. Fire insurance principally has been my occupation for the last three years. I was raised on a farm in the county in which I reside and farmed until some few years ago, and about three years ago my attention was called to the fact that one of the large companies, and perhaps others, but this one anyhow, was writing a policy called crop insurance, insuring the growing crop against loss or damage from frost and weather kill, I think drought, insects, disease, floods, excess of moisture; and being intimately acquainted with the farming conditions in that section of the country I became very much interested in this line of insurance and took up the work of soliciting business, especially on crop insurance, in 1921.

We wrote considerable insurance on wheat, oats, and corn in 1921, and made personal inspection of all the risks; in some instances even measured the ground. Then in addition to my inspection, in that year the company did send an inspector before issuing the policy, making a double inspection.

We took applications on wheat that year, as I recall it, up to within 10 days or 2 weeks of cutting time. The wheat was inspected by the company's man that gave promise of 20 to 25 bushels per acre, and the final outcome, when it was threshed, ran about 11 or 12 bushels per acre, (due wholly to excessive moisture that year.

The final result of the season's work was quite a heavy loss ratio to the company, due to the weather conditions, and also, I think, the decline in the market price that year.

The company then, in the fall of 1921, before we began writing winter wheat, divided our State into zones and established a maximum amount and a rate for each zone.

In our zone I think the maximum bushels was 12 bushels per acre, with a limit of liability, or the face of the insurance, \$8. We were not successful in writing very much wheat on those limits. What we did get, very unfortunately, was on bottom lands, and that overflowed—something that had not occurred for seven years, and there was quite a loss there in 1921.

We insured corn and oats in the spring of 1921. The oats, I think with one exception, was almost a total failure. The company paid on all our oat policies but one. Corn also showed quite a loss, but not as heavy a loss ratio as that of 1921.

At the present time, this year, we are not writing any crop insurance. The reason is obvious. The loss has been too great for the company.

Senator KEYES. Did I understand you to say you are soliciting insurance for the Hartford company?

Mr. JOHNSON. Yes, sir.

Senator KEYES. There is still a desire on the part of farmers out there to take out insurance, is there?

Mr. JOHNSON. Oh, yes; they are asking us every day about crop insurance.

Mr. BISSSELL. If you will permit me to interrupt—

Senator KEYES. Oh yes.

Mr. BISSSELL. Mr. Johnson, would they be interested in a crop policy which only gave them a limited coverage, such as you spoke about that we tried there in the second year, or one even more limited in the amount of insurance possibly?

Mr. JOHNSON. I think possibly we could write some business at a lower limit yet than we had last year.

Mr. BISSSELL. You had difficulty in placing it last year except in rather unfavorable locations?

Mr. JOHNSON. Yes; that is the way that kind of insurance works naturally. It is easy to get the poor risks but hard to get the good ones. The lower the limit, the greater that difficulty.

Mr. BISSSELL. While you were out of the room, Mr. Chairman, Mr. Johnson referred to the fact that after our first disastrous experience we tried to sell through his agency to the same farmers a policy with quite a limited coverage in amount, and found it difficult to solicit, and the insurance he did get was in the unfavorable areas.

Senator KEYES. And this year, I understand you to say, you are not writing any insurance?

Mr. BISSSELL. Not writing any.

The CHAIRMAN. Are you offering it and not finding no one who wants it, or are you not offering it?

Mr. JOHNSON. We are not offering it. The company is not authorizing us to take any applications.

The CHAIRMAN. Do you sell most of your insurance in the eastern or the western part of Kansas?

Mr. JOHNSON. In the eastern part.

The CHAIRMAN. Do you distinguish in your rate between the eastern and western parts of the State?

Mr. JOHNSON. Yes, sir. I stated while you were out, Senator—

The CHAIRMAN. If it is in the record, you need not repeat it.

Do you entertain hopes that eventually the companies will be able to write a policy that will be attractive to the farmers of the country, after more study has been made of the subject?

Mr. JOHNSON. Yes, sir. I am very much interested in this line of insurance, and had hoped that it would be successful from every point of view, realizing, of course, that the company must have a profit in order to continue writing it. Of course, I have no any way in mind that that might be done particularly.

Senator KEYES. It has been suggested by a number of witnesses that additional statistics would be helpful in bringing about or making it possible to write general crop insurance. Do you think there is anything further that the Government can do to assist in that direction?

Mr. JOHNSON. Yes, sir; I think that more information through statistics would be of some assistance to the companies, no doubt.

Senator KEYES. Does your state department in Kansas cover that situation pretty well in the way of statistics?

Mr. JOHNSON. I think fairly so; yes.

Senator KEYES. I had an idea that your State was one that did go into that pretty thoroughly, but I am not fully informed.

Mr. JOHNSON. Yes, sir.

Senator KEYES. What was your practice, Mr. Johnson, in regard to soliciting insurance? Did you feel that the situation demanded extreme care on your part in the way of getting insurance, or were you pretty liberal and did you have a disposition to insure most anyone who might desire insurance?

Mr. JOHNSON. Well, with the desire I had to make the work successful, of course I realized that we must exercise great care in the selection of risks, and I declined a great many applications. I could have written them and gotten a little premium.

Senator KEYES. I suppose your first year's experience would naturally make you careful the second year.

Mr. JOHNSON. Yes; it would. We insured too high the first year on account of the way we had of getting at the amount of insurance that we would write. We would take the farmer's yield for the past five years and average that and allow him or write insurance for three-fourths of the five-year average.

Senator KEYES. But you changed that practice the next year, did you not?

Mr. JOHNSON. Yes, sir.

Senator KEYES. I think that has been testified to.

Mr. JOHNSON. Yes. That five years preceding 1921 included the years of 1917 and 1918, when we had remarkable wheat crops, much of our wheat, the farmers stated, running from 35 to 40 bushels per acre in those two years, which brought up the average, which permitted them to take too much insurance under that plan. Had we insured in 1921 on the basis of the maximum system that we had in 1922, I think there would have been some loss even then, but it would not have been so great, because the yield was better in 1922, and the loss ratio was greater in 1921 than in 1922 on account of different ways of getting at the amount of insurance.

Senator KEYES. Was there anything further that you cared to say to the committee, Mr. Johnson?

Mr. JOHNSON. No, sir.

Senator KEYES. We are very much obliged to you for your testimony.

Mr. JOHNSON. I am glad to be able to give it.

Senator KEYES. I think, as long as the chairman is not here, we can go ahead with anyone who is ready.

Mr. BROWNE. I spoke to Senator McNary this morning, and if there is a gap I might fill it in.

Mr. VALGREN. We have about exhausted the fire insurance companies. We expect the manager of the Home Insurance Co. to be here from Chicago to-morrow.

Senator KEYES. Senator McNary has a long list of names here, but I do not know what arrangement he has made for hearing them.

Mr. VALGREN. There is one witness we have here, Mr. Dawson, of Montana.

Senator KEYES. All right, Mr. Dawson.

STATEMENT OF MR. JOHN E. DAWSON.

Senator KEYES. Mr. Dawson, if you will, give your name, residence, and your occupation.

Mr. DAWSON. My name is John E. Dawson, of Great Falls, Mont., and my position is manager of the Rocky Mountain Fire Insurance Co., a company that is owned in Montana.

Senator KEYES. That is not a mutual company?

Mr. DAWSON. Not a mutual company; a stock company.

Senator KEYES. All right, sir; tell us your experience.

Mr. DAWSON. We write hail insurance in the State of Montana only. I have been engaged in the writing of hail insurance since including 1915 up to the present time. I have never written crop insurance.

Senator KEYES. Your efforts have been exclusively confined to hail insurance?

Mr. DAWSON. Confined to hail insurance; yes, sir.

Senator KEYES. What has been your experience?

Mr. DAWSON. Our experience has been in the hail insurance line in the State fairly satisfactory. We have made some money, handling slightly under \$1,000,000 in the period from 1915 to 1922, inclusive, and we are likewise very much interested in whatever information might be gathered along the lines of the present inquiry.

We believe that the Government is one of the best instrumentalities for gathering that information. I have seen the experiments in our State of at least one or two companies—three companies, in fact—writing crop insurance, and it has been disastrous in every instance. One local stock company was entirely wiped out of business by, I might say, a somewhat abortive attempt to write a class of business on which they had no statistics and were unprepared to write a coverage so broad, and it annihilated them, writing in the States of Montana and North Dakota only in, I believe it was, 1917.

Ours is one of the Western States that has suffered very severely from the drought condition existing through the last five years.

The CHAIRMAN. Were those mutual companies that failed?

Mr. DAWSON. No; a stock company that failed.

The National Union writes business in the State, I believe, and a local company—I believe they call themselves the Bankers' Fire Insurance Co.

The CHAIRMAN. What company do you represent?

Mr. DAWSON. The Rocky Mountain Fire Insurance Co. of Montana.

The CHAIRMAN. Is that a private corporation?

Mr. DAWSON. Yes, sir; a stock company.

The CHAIRMAN. How extensively does it engage in the business?

Mr. DAWSON. Direct writing in the State of Montana only; we write reinsurance in 22 States, but write directly in one State only.

The CHAIRMAN. Do you cover any other insurance than hail?

Mr. DAWSON. Yes, sir; fire.

The CHAIRMAN. I mean crop insurance.

Mr. DAWSON. Only hail in Montana.

Senator KEYES. I understood you to say it was a fair success.

Mr. DAWSON. Yes.

The CHAIRMAN. What amount of business do you do annually.

Mr. DAWSON. Our business would run \$150,000 annually on the average, about. In the period 1915 to 1922, inclusive, it ran slightly under \$1,000,000 in premiums.

The CHAIRMAN. Has it decreased in the last couple of years?

Mr. DAWSON. Yes.

The CHAIRMAN. Owing to the crop failures?

Mr. DAWSON. Owing to the inability of the farmer to be financed to some extent, I would say.

The CHAIRMAN. Do you sell insurance in that part of Montana where you have had a drought for about five years?

Mr. DAWSON. Yes; we do.

The CHAIRMAN. You do not sell drought insurance?

Mr. DAWSON. Not at all; no, sir. We realize we are entirely too small to even give it serious consideration for a moment.

The CHAIRMAN. Where did you get your statistics on which to base the insurance contract?

Mr. DAWSON. Where do we get our statistics?

The CHAIRMAN. Where did you get them?

Mr. DAWSON. We got the experience of other companies operating in the same field; we have our statistics. I have not them with me, but I have them at the hotel. They cover a seven-year period of time. We keep our own statistics.

The CHAIRMAN. What rate do you charge for the risk insured by the companies covering hail?

Mr. DAWSON. It varies from 4 per cent to 17 per cent, having our State divided into zones.

The CHAIRMAN. In what part of the State does it reach the maximum of 17 per cent?

Mr. DAWSON. In the central eastern portion.

The CHAIRMAN. That is where the altitude is the highest?

Mr. DAWSON. No; not necessarily. It is a peculiar condition and rather difficult to describe. It is close to the hills, but a larger rolling plain, but in very close proximity to a spur of the mountain. There seems to be a particular basin in which the hailstorms are very frequent visitors, and we get as high as 17 per cent in that territory, 15 per cent for grain crops and 2 per cent additional for corn or rye.

The CHAIRMAN. Did you ever calculate the percentage of the loss of crop due to hail from year to year?

Mr. DAWSON. We do on insured crops, but I can not say that we have at hand any means of determining the loss by hail to the total crop.

The CHAIRMAN. Well, on the insured crop will give us some idea.

Mr. DAWSON. On the insured crop slightly under 6 per cent. I believe my figures show 5.54 per cent.

The CHAIRMAN. Due to hail?

Mr. DAWSON. Due to hail.

Mr. VALGREN. Is not that the result of careful selection?

Mr. DAWSON. I might state that is the result of refusing to write in certain hazardous territories. There are some counties in Montana where we will not write hail insurance.

The CHAIRMAN. Mr. Cullison, your figures are based upon the whole State?

Mr. CULLISON. Yes, sir; covering insurance written by all companies as near as I can get it.

The CHAIRMAN. And this answer of yours, Mr. Dawson?

Mr. DAWSON. Was based on the experience of just one company, where we are on the ground locally.

The CHAIRMAN. Selected risks?

Mr. DAWSON. Selected risks, I would say; selected territory, at least.

The CHAIRMAN. So that would account for the less loss than shown by the other figures?

Mr. DAWSON. Undoubtedly. We could go into two counties, and I suppose our loss would be increased 15 to 20 per cent. At least, that is the experience of our competitors—worse than that.

The CHAIRMAN. Would your company be interested in extending its field if you had reliable data?

Mr. DAWSON. Yes, sir; we would be very glad to.

The CHAIRMAN. Do you follow the advice of others, that the department should cooperate with other agencies in gathering data over a period of years?

Mr. DAWSON. It seems to me it is the only way it can be done. It seems to me the Government would be the best organization. It is a very big task for the insurance companies, because it is a competitive field and there is no complete exchange for information.

The CHAIRMAN. Is that all the statement you desire to make?

Mr. DAWSON. That is all.

The CHAIRMAN. Thank you very much, Mr. Dawson, for your statement.

Senator KEYES. There is a gentleman here, Senator, who says he spoke to you this morning.

Mr. BROWNE. Senator, if there is a gap—

The CHAIRMAN. I do not know whether there is a gap or not, but we would be very glad to hear from you.

STATEMENT OF MR. HERBERT J. BROWNE.

The CHAIRMAN. Will you give your name to the reporter?

Mr. BROWNE. Herbert J. Browne.

The CHAIRMAN. Whom do you represent?

Mr. BROWNE. I am a farmer; I am not representing anyone but myself. I have some information that I think will be of service.

The CHAIRMAN. Where do you live, Mr. Browne?

Mr. BROWNE. My residence is in Pennsylvania. I am in Washington a great deal of the time. I am largely devoted to traveling. My work is the work of an economist, and I specialize on agricultural economics, at present in connection with the weather.

The CHAIRMAN. Are you associated with the Government?

Mr. BROWNE. No, sir.

The CHAIRMAN. I did not clearly get your connections?

Mr. BROWNE. I am a farmer. I am a practical farmer, among other things.

The CHAIRMAN. I heard that.

Mr. BROWNE. I am directly interested in an analysis of weather conditions, crop variations, crop abnormalities, all of which enter into the problem of insurance.

The CHAIRMAN. Are you doing this on your own hook?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. At your own expense?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. Do you not use the material that you gather?

Mr. BROWNE. Yes, sir; I turn it into magazine articles.

The CHAIRMAN. That is what I wanted to get. We want a picture of you here in this record.

Mr. BROWNE. A series of four articles has just appeared in the Dearborn Independent, Mr. Ford's paper, on the weather and the production of food, in which I am advancing the proposition that the Government needs to interpose to stabilize prices for farmers, and particularly to start the accumulation of wheat against a period in which there will be practically an entire and perhaps universal crop failure in wheat, and it is necessary to conserve human life that the Government should intervene and begin the storage of wheat, which will have the double benefit of stabilizing the price for the farmers, who at present, when there is a large crop, produce the wheat at a loss, and can only get a price that pays the cost of production when there is such a failure of wheat that many farmers are thrown into bankruptcy by having no crop at all.

The CHAIRMAN. Are you referring now to the study we are making on the question of insurance or to this article in the Dearborn Independent?

Mr. BROWNE. I am referring to the general situation, which will have a direct bearing on what the committee is now studying, the necessity of insurance. Insurance goes both ways.

The CHAIRMAN. I did not get your thesis a moment ago.

Mr. BROWNE. The world is concerned with a wheat shortage. The crop in the United States this year will probably be the smallest that you have had in 20 years. We are entering into a period now, and we are in our third year of a period of abnormality of weather, and it is an increasing abnormality, and if it means that we are going to see in the United States a repetition of the disaster of the Volga Basin, it means that the Government alone can intervene and protect the situation. That means to protect its own people against a food shortage by accumulating wheat. Instead of

providing for a market for export, accumulate the wheat in the United States. We have warehouses enough and we have elevators enough to permit of that accumulation.

The CHAIRMAN. It is an interesting doctrine, but an entirely new one to me. I have been taught the story that one of the causes that has kept down the prices of farm products below the point of the cost of production was the surplus which has smothered the farmers of the country.

Mr. BROWNE. Yes, sir.

The CHAIRMAN. Now, you say we are going to have a food shortage and that we ought to begin to store up our wheat against that shortage.

Mr. BROWNE. Yes, sir.

The CHAIRMAN. Against the day of famine?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. Well, go ahead.

Mr. BROWNE. A statement was made yesterday before the American Academy of Science at its meeting here in the National Museum by Dr. C. G. Abbot, who has been for a number of years at the head of our astrophysical service, in which he states that beginning about three years ago the amount of the sun's heat reaching the earth had decreased until at the present time it amounts to 3 per cent less than the normal, and it is continuing at that low level, the lowest that has ever been recorded since they began their observations in 1905. There has never been anything like it since that date.

The CHAIRMAN. You say the crust of the earth and the atmosphere surrounding it is getting cooler year by year?

Mr. BROWNE. Yes, sir; at present.

The CHAIRMAN. Is that going to continue?

Mr. BROWNE. I can not tell.

The CHAIRMAN. What is your view on the subject?

Mr. BROWNE. My view is that it might continue during this period of maximum sun spots.

The CHAIRMAN. I do not know how long the sun spots are going to continue.

Mr. BROWNE. The sun spots run in cycles of 11 years and 1 month, and the maximum of sun spots will come in 1926-27.

According to some very sound meteorological observations which can be gathered we come into a period of sun spot maxima in 1926-27, and if it should be accompanied by a serious volcanic explosion, throwing into the atmosphere of the earth a large quantity of volcanic dust, we would have undoubtedly in 1926-27 a repetition of the conditions on the year 1816, which is known as the year without a summer. In that year no crops were raised north of the Potomac and the Ohio Rivers. In New England that year is known as the poverty year. There were no crops raised in New England in that year. There was snow and ice in every month of the year.

Should we have a repetition of those conditions in the year 1926-27 it would take the entire power of the Federal Government to save human life in the United States, and live stock would have to be killed in order to save the meat. You could hardly save enough live stock under those conditions for breeding purposes. And this is a repetition of an historical year.

The CHAIRMAN. You mean, then, that in the next few years, on account of sun spots the decrease in the heat of the sun's rays will be sufficient to curtail the production of foodstuffs in the world?

Mr. BROWNE. Yes, sir. In other words, what happened to the Volga Basin can happen all over the world.

The CHAIRMAN. It has got to be pretty cold to do that?

Mr. BROWNE. No, sir; the present change of 3° if continued, would be sufficient. According to the estimates of Prof. Ellsworth Huntington, of Yale College, they show that a decrease of 4° if continued would reach the glacial period.

The CHAIRMAN. If it became 4° colder?

Mr. BROWNE. And maintained.

The CHAIRMAN. For a number of years?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. Then perhaps we would get back to the glacial period?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. How are you going to get back to the glacial period when around here it rarely gets below freezing and in summer is very much above the point of comfort?

Mr. BROWNE. I say if we get permanently an average of 4° lower of the earth's temperature, according to Prof. Ellsworth Huntington's estimation, we will get to the glacial period.

The CHAIRMAN. Do you believe his statement that 4° decrease would do it?
Mr. BROWNE. Yes; I believe that is generally accepted by meteorologists.
The year 1816 is a year of record. I was a New Hampshire man, Senator, and my grandfathers were young farmers in 1816, and I have heard of the record of that year from them.

I have here Pierce's records which give the record of that period month by month. There was snow and ice in every month of the year.

The CHAIRMAN. In New Hampshire?

Mr. BROWNE. All over the country north of the Potomac and Ohio Rivers. There was half an inch of ice in Philadelphia on the 4th of July, and in June there were 4 inches of snow all over New England. With the exception of a little hay, there were no crops raised in New England at all. The farmers either salted down the meat of their cattle or sold their cattle to more fortunate neighbors who carried over enough hay crop to maintain them, for \$6 and \$7 a head.

The Indians had a tradition of a famine in the Mississippi Valley in which the buffalo and deer entirely disappeared, and the Indians only survived by being able to get to the lakes and rivers and secure fish.

There is a rock in the Ohio River near Pittsburgh which has only been uncovered twice since we have been in the country, and when it was uncovered last they found on the rock below low-water level marks which were apparently put on by the Indians themselves to show the low-water bench mark, probably of that traditional year of drought.

The CHAIRMAN. The cold weather would be accompanied by lack of moisture, then?

Mr. BROWNE. It was at that time and it probably would be this time, but you do not have to have continuous cold weather to spoil crops. You only have to have cold waves such as they had in that year 1816.

Now, long-range forecasting meteorology is almost on the verge of becoming practical. The Canadian Meteorological Service is now establishing stations in the far north on the Mackenzie River, and will have some on the Arctic shore. They will have two, and we will have three stations, and at no great expense. It will not cost as much as to maintain one torpedo boat to maintain all five stations, and we will get five days' warning of cold waves that will spoil fruit, and with five days' warning any orchard that can not be protected is not well handled. At the present time we get 36 hours' warning of a cold wave and that is not sufficient for them to protect the orchards.

The CHAIRMAN. Of course, that all depends upon the number of degrees below freezing?

Mr. BROWNE. Yes.

The CHAIRMAN. I know something about smudge-pot protection. You can not raise the temperature over 6°, and in order to raise it that much there must be a very slow air movement.

Mr. BROWNE. Yes; I raise fruit.

The CHAIRMAN. Your theory is that if you are going to have a tremendous cold blast for four or five days, several degrees below freezing, you will be able to protect the fruit. You could not do anything to protect it except by building a fire around each tree.

Mr. BROWNE. Yes; I understand that.

Now, one of the Japanese meteorologists has carried on the work far enough to forecast the failure of all the rice crop in northern Japan. We are now far enough along to forecast weather conditions that far ahead.

I have not only used my own data but that of others and was able to beat the Government by two months on their report on winter wheat this year. I appeared before the House Committee on Agriculture on the 6th of February, at which time I forecast the wheat condition which is now confirmed by the Government.

The CHAIRMAN. What was your forecast?

Mr. BROWNE. My forecast was that the winter wheat was going to be very badly damaged.

The CHAIRMAN. Did you assign any reason for that prophecy?

Mr. BROWNE. I did; the failure of snow covering on the western plains and the very small amount of rain which fell last fall in the whole country meant that we were going to have a very serious blow ahead of the winter's wheat. That is more than confirmed now by the conditions which have developed.

The CHAIRMAN. How did you reach that conclusion in anticipation of the occurrence of this hazard?

Mr. BROWNE. The hazard was to my mind and to the minds of those who work along the same lines that I do, evidenced by the very small fall of rain all through last fall. We had practically a drought. Also by the position of the Aleutian low,

the low of the Aleutian chain, which was out of its position, and that the lows which were passing over the country were too far north, gaining in vitality when over New England, which gave New England the heaviest snowfall of many years and produced the longest winter season on the Atlantic coast of which we have any record. It was evident if those lows were going to cross at 40 there would be a dry spell across the United States. It was obvious; it could not be avoided. In conjunction with that, we have had last year a very abnormal condition indeed due to the passage of the lows too far north and too numerous, and we got a great precipitation on the Gulf coast. That was what set the cotton back, so far as rain was concerned, all through the early part of last spring.

I did forecast that in February of last year and it came out as I said it would.

The CHAIRMAN. Have you forecast any losses that might occur through the misbehavior of nature this summer?

Mr. BROWNE. Yes, sir. We are going to have the smallest crop of wheat that we have had in this country in 20 years.

The CHAIRMAN. And many things may occur between now and harvest time.

Mr. BROWNE. Certain things inevitably will occur. We are going to have a smaller acreage in spring wheat and it will come out badly.

The CHAIRMAN. What is your estimate for 1923?

Mr. BROWNE. I say the wheat crop will be the smallest that we have had in 20 years.

The CHAIRMAN. I think the Department of Agriculture says 590,000,000 bushels, as I remember it.

Mr. BROWNE. That is a very small crop, is it not?

The CHAIRMAN. Then on account of those untoward conditions that are bound to occur in the future, due to lack of sun heat, do you think we ought to insure the crops?

Mr. BROWNE. I do not see how the Government can very well insure crops.

The CHAIRMAN. I am not speaking about the Government insuring them necessarily. What have you on that line, Mr. Browne—on the question of crop insurance, which is the subject matter under discussion.

Mr. BROWNE. The personal element enters so largely into crops that the insurance of the result of the crop is a very difficult thing. You can insure against hail, you can insure against frost, but you can not insure against the personal equation that enters into crop failure. You have your climate No. 1, too much or too little rain. You can kill a crop with too much rain just as well as you can kill it with too little rain. You can kill it with too much heat just as well as with too much cold. You can kill it with germs as well as in any other way.

You have got an average of about 30 per cent, I think is about what the figures stand, on your wheat shortage. I think it runs about 30 per cent.

Taking the years 1910 to 1920, and I have left out two years in that, you had an average of 32.7 per cent of total losses. Those are the Agricultural Department's figures.

In 1910 it was 33.8; 1911, 37.7; 1912, 29.5; 1913, 23.5; I drop then to 1916, 38.7; 1917, 36.3; 1918, 25.7; 1919, 37.6; and 1920, 32.2.

Now, your insurance is broadly of two types; that is, a vertical insurance or horizontal insurance. If you have cooperative movements over a wide enough territory you can get horizontal insurance, but vertical insurance is largely the old insurance where men insured themselves. It was cheaper to carry the risk themselves than to pay the money to have some one else carry it for them. There are some large concerns to-day that carry their own insurance because it is cheaper than to have some one do it for them.

The CHAIRMAN. Have you made a study of crop insurance and the results that have been obtained by the insurance companies?

Mr. BROWNE. No; I have not. The insurance companies have got to make their data, I think it is obvious, on the basis of the broadest risk; therefore it makes a very expensive insurance to the insured. There is not enough data to make insurance on crops a scientific risk to-day. We haven't got it.

The CHAIRMAN. Do you not think the Government should go forward in assisting in the collection and dissemination of data of this kind that would make that insurance practicable and possible?

Mr. BROWNE. Beyond question, and I think on top of that that the Government should extend the ability of the Weather Bureau and of the Astrophysical Bureau to get material which will give us these forecasts. We are right on the edge now of being able to definitely have seasonal forecasts. We need to have the Siberian stations reestablished by the Russian Government and we need to have a correlation of all the weather stations of the world.

Here we have had a Navy radio station in Washington for a number of years and I have been unable to find that until very recently there has been any effort made to obtain daily reports from the hundreds of vessels which travel what we will call the weather centers of the seas, in order that we might have the aid of their information.

The position of the high, which is usually located near the Azores in the Atlantic, and of the Pacific high, which is located between San Francisco and the Hawaiian Islands, the position of the Aleutian low, and of the Icelandic low are four barometers. If we had their movements we could forecast weather in the United States a week ahead of what they do now, but we do not get the data, yet it is available, vessels playing in that service all the time. There needs to be some money spent on those two services.

The CHAIRMAN. You say you could forecast seasonal changes. How far would that be in the future?

Mr. BROWNE. Well, one season in advance certainly. There are certain conditions which overlap. If we have had a very dry fall west of the Mississippi through the plains we can forecast the condition of winter wheat for the following year. If we have a very heavy Canadian—

The CHAIRMAN. Pardon me. Is the Department of Agriculture doing that or are you doing it?

Mr. BROWNE. I am doing it in conjunction with quite a number of meteorologists working independently. The Government has no monopoly of the meteorological service. There is a good deal of work done in the governmental agencies, but they do not do it all.

The CHAIRMAN. Are you supplying this information for Henry Ford?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. You are in his employ?

Mr. BROWNE. No, sir.

The CHAIRMAN. But you do supply him with records of this kind?

Mr. BROWNE. Yes, sir; I am not an employee of Henry Ford.

The CHAIRMAN. Do you have superior facilities to those of the Department of Agriculture?

Mr. BROWNE. No; but I say we are a little freer. If we discover a fact we do not have to prove it up for 20 years before we are willing to announce it. A Government department is compelled to be very conservative and independent agencies are not.

The CHAIRMAN. The Government collects facts and statistics and reports, and you prophesy?

Mr. BROWNE. No, sir; we collect statistics and report, but we do it more quickly than the Government does.

The CHAIRMAN. Do you sell your service?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. You have clients?

Mr. BROWNE. I have certain clients. I put them into cotton a year ago in February at 16 cents and they sold out at 28.

The CHAIRMAN. You put what in?

Mr. BROWNE. My clients.

The CHAIRMAN. You told them to buy cotton at 16 cents?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. And you told them to sell it at 28?

Mr. BROWNE. No; they sold it when they were ready.

Senator KEYES. They did not hold on long enough, did they?

Mr. BROWNE. They did pretty well. I put them into wheat in October, and they are already halfway to their mark. I told them they were going to pay a dollar and a half for wheat in October, and they are operating on that.

The CHAIRMAN. Well, that is interesting. And you think seriously that under your scheme, your bureau, and your service you can prophesy seasonal conditions; that is, from 90 to 100 days ahead?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. And thereby you can determine what the harvest shall be?

Mr. BROWNE. I think so. I think we are that far along.

The CHAIRMAN. Getting back now to the original proposition, which perhaps may be remotely connected to the subject of the inquiry, you think that we ought now to begin to conserve our foodstuffs?

Mr. BROWNE. Grain—particularly the food grains. Wheat is the one that we could start best on. The conservation of wheat by the Government would mean cheaper bread.

The CHAIRMAN. If this great disaster proves comparable to the glacial period in the geological calendar, then the price of wheat will naturally ascend in the next few years.

Mr. BROWNE. Yes. Mind you, I have not predicted that. I merely used the glacial element according to Prof. Elsworth Huntington, of Yale College, who based it on 4° decline in the normal earth's temperature, and Doctor Abbot says it is now 3° below, and has been so since January.

The CHAIRMAN. And that will continue for 11 years?

Mr. BROWNE. No; I merely say what will happen within 90 days. I can not say about that. It is apt to continue during this period of maximum sun spots at which we are now. Probably in the next few years it will rise. In 1926-27, when we have the maximum sun spots, is the danger period. At the time of maximum sun spots, if there is a serious volcanic explosion, there will be thrown into the earth's atmosphere very much like a blanket of volcanic dust, and that interferes with the sun's rays, so that the heat of the sun's rays on the earth is less than normal.

In 1816 Tambora blew up in one of the Dutch East Indies and threw into the atmosphere something like 2,800 cubic miles of volcanic dust, and within 90 days that was extended all over the world. It spread over England and over eastern and western Europe, and it also extended into Africa, and largely over the globe.

Now we are running into another volcanic period. Every day we read something about earthquakes, and volcanoes usually follow. So, I say if a series of volcanic explosions occur in 1925 and 1926, so that the dust will be in the atmosphere at the time of the sun-spot maximum, we can look for a repetition of 1816.

An English scientist by the name of Sir William Beveridge, a very prominent man in Great Britain, has mathematically worked out a lot of the sequence of famine, and his work is accepted as being very important and as part of the principal statistical papers of the world, and he has worked out a cycle which checks up on every serious famine which the world has had since we have had any history of it. There was quite an article on it in the Literary Digest. You can send and get the statistical papers in the Library of Congress, which will give his mathematics and his words. He has checked up on a period of 271 years, which is composed of two periods, one of 123 and one of 148 years, the coincidence of every great famine that has occurred. He was of the opinion it might hit us in 1923. I did not accept his figures because I have a little different basis of working it, but it checks up on 1927.

The CHAIRMAN. Four years from now is the famine?

Mr. BROWNE. Yes, sir; 1927. And if anyone cares to do a little multiplication they will find that the 1927 period checks back on his 271 years' data to the great famine of the period of Diocletian, which occurred in 300, and checks back to Pharaoh's time. There have been four famines in Egypt, including that of Joseph, seven famines in India since the British occupation, in which 15,000,000 lives were lost.

The CHAIRMAN. Is this famine to be a wheat famine, a corn famine, a cattle famine, or every kind of a famine?

Mr. BROWNE. It will be every kind of crop famine you can think of.

I do not expect any congressional committee to accept my data as settling anything, but I want to direct to your minds the fact that some of the most serious scientists in the world have been working on this question for years and their minds are concentrating on periodicity of crop variations traced back to the action of the sun, and the sun is well known to be a variable star, and the change in the sun's heat is the thing which finally determines whether we get crops or do not.

I do not think we are going to have a return of the glacial epoch, but I do think the signs are very obvious that we are already in a period of very serious abnormalities of weather. Now whether it is too much rain or too little rain, or too much heat or too much cold, if it destroys the crop it becomes a matter of serious consideration, and no effort of monetary insurance is going to stop it. The great provision has got to be through storage.

The Aztecs stored food. They had records running back over a long period, and they stored their grain over against what had occurred so often that they knew there was going to be a crop failure in Mexico once in every so often. The Incas did the same thing. And with the lesson of the Egyptian famine I think it is a good thing to look into.

The CHAIRMAN. It is very interesting, indeed. Have you advised Mr. Henry Ford of your thought along the line of the food trouble?

Mr. BROWNE. I have advised his editor of it. They have thought enough of it to print a series of four articles, the first one of which was on the 21th of March, and the 7th and 14th of April, and it is receiving more attention abroad than in the United States.

Sir William Beveridge's work over there, which appeared in the magazines last year—the one most important appeared in December of last year—has attracted wide attention and is being studied. Unfortunately, scientists as a rule are very conservative men and they confine their observations to very scientific papers and it does

not get to the public mind as broadly as I should wish, but anyone who will read a book like this, Pierce's Weather Records, and get the history of the year 1816, and what occurred in the United States and consider that that was governed by the sun-spot maxima period, a 55.6 year period, and that we will come into the second 55.6 year period in 1926-27, and that we are running into an earthquake period, and that volcanic explosions usually follow earthquakes, and that if these things run together we will have the climate right here in the United States that we had in 1816, and it will be world-wide.

The CHAIRMAN. Will those earthquakes occur in New Hampshire or in that part of the country?

Mr. BROWNE. No.

The CHAIRMAN. Or out on the Pacific coast?

Mr. BROWNE. No; there are two weak spots in the earth's crust, one which runs from the Aleutian chain down through California to Chile; that is the north and south chain, and the other is an east and west chain that begins at the foothills of the Himalayas and runs through Asia-Minor, across Italy and Spain. There are two or three theories as to what set them going, but it does not make any difference so long as we can figure there is a periodicity about it and that volcanic explosions usually follow the earthquake period. That seems to be pretty well developed.

My sole object in intruding this upon the committee was to give you a thought which would perhaps make it advisable to look further into the same subject, because the data is available. You can get Doctor Abbot from the Astrophysical Service, who can tell you—

The CHAIRMAN (interposing). Well, Mr. Browne, I apprehend some difficulties in working out the problem of crop insurance, but how to keep the sun shedding unimpaired its heat rays is something that I do not know how a congressional committee could work out.

Mr. BROWNE. No, sir; but insurance has been pretty broadly sold through the world. We insure pretty nearly everything. We try to stabilize everything too, wages, salaries, railroad freight rates. We have got stabilization pretty well sold to the public, and if so simple a matter as the Government's intervention in the storage of wheat would accomplish a double result—a triple result—stabilize the price to the farmer, who loses money—who is killed by his own prosperity. If he gets a big crop and there is universally a big crop, the price of wheat is below the cost of production, and if he gets a small crop, those who are fortunate enough to have wheat get out and those who have not any wheat are practically driven into bankruptcy. You take the position of the western grain farmer to-day—it is a serious situation.

An expert from the Department of Agriculture who spoke on Tuesday at a luncheon of a small club told us the situation, and I have never heard such a pessimistic story in my life as to the bank conditions in the West and the economic condition which confronts the West. I think members of the Senate must have been personally in touch with that and know it to be true.

The only time a farmer can make money is when there has been a calamity and so many farmers have lost by failure of crop those who are left can get ahead. And all of us encounter in every direction the fact that where the crop is bountiful the farmer does not get his cost of production.

What more practical way could be devised than the accumulation and storage of wheat? There is insurance.

The CHAIRMAN. Would you have the Government buy up wheat and store it?

Mr. BROWNE. No; I think a corporation very much like the Grain Corporation could handle it. We have the storage capacity and the elevator capacity.

Senator KEYES. What grain corporation?

Mr. BROWNE. The one we had during the war.

The CHAIRMAN. That was a governmental agency and the stock was all subscribed by the Government out of the Treasury of the Government.

Mr. BROWNE. I know, but the Government was not making a real expenditure; it was merely loaning some money that could be paid back with a profit to the Government.

The CHAIRMAN. It got it paid back with a profit, yes; but would private capital be interested in buying all the grain in the country and storing it?

Mr. BROWNE. I do not think they would have to. I think the matter would practically finance itself if the Government sets the agency afoot, as it is doing in very many other directions, the irrigation projects and many others.

The CHAIRMAN. No; in that irrigation proposition the Government supplies the money.

Mr. BROWNE. Yes; and gets it back.

The CHAIRMAN. But who will supply the money to originally purchase this wheat? Mr. BROWNE. All right, but there is a great difference between the expenditure of money and putting up a revolving fund.

The CHAIRMAN. Then you want the Government to go in and buy up all the wheat?

Mr. BROWNE. No, sir.

The CHAIRMAN. Who is going to do it?

Mr. BROWNE. No, sir; the Government shall advance the banking funds and the amount of money that would be required would finally go into the channels of commerce. You have the Federal reserve banks with enormous credit, and it is merely a matter of stabilizing that credit. The security is a bankable security, and it only needs a governmental agency to really get the thing going on a big scale.

The Sinclair-Norris bill would practically cover it. You have to have a revolving fund to get it going.

Well, Senator, that is about all I have to say. I just wanted to get that thought to you.

The CHAIRMAN. We are very glad to have had your thoughts and observations in the record. I hope some things which you may more or less anticipate with uncertainty will not come true.

Mr. BROWNE. Well, I anticipated the condition of your winter wheat crop, and I am afraid that is pretty nearly demonstrated now.

The CHAIRMAN. Have you given us your local address?

Mr. BROWNE. I am at the National Press Club.

The CHAIRMAN. We are very much obliged to you, Mr. Browne.

We will adjourn now until to-morrow morning at 11 o'clock.

(Whereupon, at 4 o'clock and 15 minutes p. m., the committee adjourned until to-morrow, Thursday, April 26, 1923, at 11 o'clock.)

INVESTIGATION OF CROP INSURANCE.

THURSDAY, APRIL 26, 1923.

UNITED STATES SENATE,
SELECT COMMITTEE ON CROP INSURANCE,
Washington, D. C.

The select committee met, pursuant to adjournment, at 11 o'clock a. m., in room 324, Senate Office Building, Senator Charles L. McNary presiding.

Present: Senators McNary (chairman) and Keyes.

The CHAIRMAN. The committee will please be in order.

Mr. Doyle, whom have you to appear this morning?

Mr. DOYLE. We have Mr. J. K. Lesch, western manager farm department, Home Insurance Co.

Senator KEYES. Of where?

Mr. DOYLE. Mr. Lesch's address is in Chicago. The Home Insurance Co. is of New York.

The CHAIRMAN. If you will come forward, Mr. Lesch, please, and make such statement as you are prepared to make.

STATEMENT OF MR. J. K. LESCH.

Mr. LESCH. Gentlemen, I have written down in a brief way my ideas about some of these things. I thought you might like to write it into the record, or I can read it.

The CHAIRMAN. Is it written?

Mr. LESCH. Yes, sir; in pencil.

The CHAIRMAN. Well, you had better go ahead.

Mr. LESCH. Not having had opportunity to hear the testimony of the other gentlemen who have been with you, it is quite likely that some of the things I may say will be a repetition.

I have been manager for the farm department of the Home Insurance Co. for seven years and during that time I have hoped and aimed to perfect a plan of indemnity contract to care for the needs of the farmer in connection with his crops.

My company will be glad to extend its operations in that direction, even at a loss in its initial operations, with a view to later perfecting some plan which would afford a contract on a self-sustaining basis. Such plan is perfectly feasible and presents no difficulties in States where crops are fairly stable, such as Illinois, Iowa, eastern Nebraska, but we find that the farmers will not purchase crop indemnity in that territory.

The CHAIRMAN. Let me ask you, are you talking about hail insurance or any particular form of insurance, or are you talking about crop insurance in general?

Mr. LESCH. Crop insurance in general.

The CHAIRMAN. Then you think it is only practicable in two States of the Union?

Mr. LESCH. No; I said in the States where crops were fairly stable, such as Illinois, Iowa, and eastern Nebraska. we are not able to sell our general crop policy. The perils that are covered against by the contract do not seem to obtain in that particular territory. In the territory where there is a crying need for the protection, the perils insured against are so certain to occur as to make the premium charge prohibitive, and the amount of indemnity afforded practically negligible.

In some sections our research leads us to believe that no more than two normal crops may be expected within a five-year period. It follows that the three years in which crops were abandoned, or practically so, would result in a total loss under the policy for each year.

The CHAIRMAN. How could that be, if you insure against hazards and not against production, or price? If there is a crop failure in three years out of five and the farmer had the policy covering for hail and frost, and if for some reason—

Mr. LESCH. Drought.

The CHAIRMAN. You are speaking of all the elements?

Mr. LESCH. Yes, sir; the elements covered under the general crop insurance policy. You see, for instance, what I have in mind is this: Take the western section of Kansas. I traveled in that State for a number of years. They only average two normal crops in five years. In the other three years the crop is a failure for some cause or other. Now if the crop policy were bought by the farmers in that section and we had to depend upon our experience in that section to pay the losses we would have to collect in a five-year period a sufficient amount of premium to pay three 100 per cent losses, three years of failures.

The CHAIRMAN. Is that a recent condition, or has that condition obtained for a great many years?

Mr. LESCH. That condition has obtained for a great many years.

Now, in looking over statistics you may find that they show the average crop yield for a certain number of years. That is to some extent misleading. For instance, in the two years when they have crops they may raise 30 bushels of wheat to the acre. In the five-year period they have raised 60 bushels of wheat to the acre, which is 12 bushels per acre for each year, but in three of those years they have not even threshed it, it is not cut, it does not mature.

Now, in that section if the policy were purchased and we had to depend upon that particular section to pay its own way, they would have to pay a sufficient premium in the five-year term to pay three 100 per cent losses, assuming that there was no loss in the other two years.

I judge that you are, of course, familiar with that particular section that I am referring to. You will find this to be true in Kansas and in some sections of Nebraska and Oklahoma and the Pan Handle of Texas—you will find a draw, you might say, in the country; the rest of the territory may be a total failure as to crop, and yet in that low bottom they may produce a crop only every year.

I do not want you to get the impression that in that entire district for three years no crops are produced, because that would not be correct. But, speaking now of the upland outside of those draws, river bottoms, as they call them, although they are dry a good deal of the year, that condition does obtain, and the premium to be collected in the case I have just cited for five years would have to be practically 100 per cent of the crop value for the two years when crops are produced.

The only way this could be avoided is by such a general distribution of risk over both the favorable and unfavorable areas as to be sufficient to produce an average premium income from the whole to care for the unusual losses from the less favorable territory, and the expense of transacting the business throughout the whole. This is perfectly feasible from the insurance standpoint, but impossible as a practical proposition, since our contracts are unsealable in the favorable districts.

My research inclines me to believe that the demand for this sort of indemnity will eventually be met by some plan, but it will not, in my judgment, be perfected until the information respecting cultivation, planting, and crop yields is available in much more minute detail than at present obtains.

In discussing crop insurance you must bear in mind that the term "insurance rights" does not include loss or damage by hail, nor loss occasioned by faulty germination, but is limited to loss arising from climatic conditions, including frost, winter kill, flood, drought, insects, and disease, but excludes loss from fire, hail, and wind, these latter being made the subject of specific contracts, and there is a superabundance of facilities, both stock and mutual, to care for the needs in any and all sections of the United States.

There is at the moment a plan for covering crop insurance which appears feasible and workable in connection with insurance of cooperative associations, canning industries and like organizations representing groups spread throughout a considerable territory, the insurance of which covers all of the crops in all of the territory and gives sufficient average to eliminate the element of chance incident to a single risk, and places the business under the general average experience.

There is some thought being given to syndicating the experience of the companies so that the unfortunate experience which must, we believe, inevitably follow an inauguration of the crop insurance plan generally throughout the United States, will not fall too heavily upon any one company, but the plan is necessarily retarded, and made prohibitive in a great many States, by reason of the antitrust laws which prohibit agreements and understandings between the companies with respect to the business transacted in such States.

No one is more enthusiastic nor more hopeful than I that within a reasonable time some plan will be perfected which will permit our company to safely engage in the business, and we are hopeful that the Government may find some means, through some of its agencies, to collect the data respecting the experience of farmers in a smaller

unit, at least, than the various counties of the various States of the United States, and this should be done not only in connection with grains and vegetables, but also in connection with what we term special risks, such as trees and vines fruits and berries.

My duties with the Home Insurance Co. are confined almost exclusively to farm insurance of all classes, and I am, therefore, quite enthusiastic and anxious to do anything within my power to extend our operations along the direction of crop insurance, whenever it can be done with reasonable assurance of safety to the interests of our stockholders. Not only are we quite anxious to assist the farmer with the hope of building up a substantial business, but the encouragement of the industry means the creation of large insurable values after the products have been matured, in addition to substantial improvements on the farm properties, the insurance of which means increased premium income to our general insurance business.

The CHAIRMAN. Senator Keyes, do you want to ask some questions?

Senator KEYES. No; you go ahead with what you want to ask.

The CHAIRMAN. I want to ask this question to clear up a matter in my mind. How long has your company been operating in this field of crop insurance?

Mr. LESCH. We began in 1920; 1920, 1921, and 1922.

The CHAIRMAN. Can you specify the form of your contracts?

Mr. LESCH. Yes; I have a copy here.

The CHAIRMAN. I do not know as we want a copy in the record. What does it cover particularly, and what is the basis of the charge for the risk assumed?

Mr. LESCH. The application for the insurance reads: "Against loss or damage, except as hereinafter provided, to the growing crops herein described when caused by the elements, including frost, winter kill, flood, drought, insects, or disease, but excluding loss or damage caused by fire, hail, wind or tornado, or failure of seed to germinate, or failure of insured to properly prepare the ground for seeding, or to properly seed, cultivate, and harvest said crops."

The CHAIRMAN. That covers just the cereal crops?

Mr. LESCH. No; this covers any sort of crops they may want to insure.

The CHAIRMAN. That is what I want to get. Have you gone into the fruit field?

Mr. LESCH. No; we are not in the fruit; we have gone into the grasses, grains and vegetables.

The CHAIRMAN. Have you handled corn?

Mr. LESCH. Yes.

The CHAIRMAN. Have you found the business profitable?

Mr. LESCH. No, sir; extremely unprofitable as a whole.

The CHAIRMAN. The company has lost money, then?

Mr. LESCH. Yes, sir.

Mr. DOYLE. Mr. Lesch, that is due, is it not, to the fact that you can not sell your contract in the favorable districts?

Mr. LESCH. Yes; that is true. In the territory where we would like to sell, where we could probably do business with profit and where the results show that we have made some money, we can not sell. But you get out in that section that I was describing to you awhile ago and we could dissipate the assets of the company in a very short while.

Mr. DOYLE. You are still doing business, are you not, or would like to do business in the States of Iowa, Illinois, and Nebraska?

Mr. LESCH. Yes, sir.

The CHAIRMAN. What one of the crops mentioned in your policy do you find the subject of the greatest hazards?

Mr. LESCH. Well, possibly wheat, because it is subject to the pest hazard, which does not affect corn so much, and to excess moisture at certain seasons of the year, which brings about a cooked condition, produces shriveled wheat, inferior in quality, and that does not affect the corn because it matures a little later, and it goes through the milk—what they call the milk—at a different period.

The CHAIRMAN. What rate do you charge for the risk?

Mr. LESCH. That depends on the State and county.

The CHAIRMAN. Do you differentiate between the various crops covered by your policy?

Mr. LESCH. Yes; we do.

The CHAIRMAN. Which one bears the highest rate—

Mr. LESCH. What State do you want to inquire about?

The CHAIRMAN. Well, take any State.

Mr. LESCH. Let us take in Texas. The winter wheat is \$12, fall oats is \$12, rye—

The CHAIRMAN. That is \$12 an acre maximum insurance?

Mr. LESCH. Twelve per cent, I mean; I said \$12; 12 per cent; fall vats, 12 per cent; rye, 10 per cent; barley, 12 per cent. They do not grow corn to any considerable extent down there; at least we publish no rate on corn.

The CHAIRMAN. Can you take Illinois or Iowa?

Mr. LESCH. Here is Illinois.

The CHAIRMAN. That is all right.

Mr. LESCH. We have winter wheat. I will take Adams County, for instance.

The CHAIRMAN. Do not let us take it by counties.

Mr. LESCH. You see, the rates vary in the different counties.

The CHAIRMAN. All right.

Mr. LESCH. Adams County, the rate on rye is 5 per cent; winter wheat, 6 per cent; corn, 5 per cent; kafir corn and milo maize, 5 per cent; oats, 5 per cent; barley, 6 per cent; speltz, 6 per cent; spring wheat, 6 per cent.

The CHAIRMAN. It is all cereals that you have been writing. Have you anything in the way of vegetables?

Mr. LESCH. That is all special contract.

The CHAIRMAN. Is Adams County a typical county or a very favorable one?

Mr. LESCH. Illinois is a favorable State.

The CHAIRMAN. I am speaking of the county.

Mr. LESCH. Yes.

The CHAIRMAN. Does that rate obtain generally in the various counties—that range of rates?

Mr. LESCH. Well, Alexandria, for instance, the rye rate is 2 per cent higher.

The CHAIRMAN. Where is Alexandria?

Mr. LESCH. That is the southern part of the State. Winter wheat is 1 per cent higher, the corn is 1 per cent higher, kafir corn is 1 per cent, oats is 1 per cent higher.

The CHAIRMAN. I understand.

Mr. LESCH. Barley is 1, speltz is 1, spring wheat is 1.

The CHAIRMAN. Then, I see the rate through Illinois is practically 50 per cent less than the rate in Texas?

Mr. LESCH. Yes, sir.

The CHAIRMAN. And about that same rate is carried in Iowa and Ohio?

Mr. LESCH. We do not operate in Ohio from my office.

The CHAIRMAN. Do you operate in the New England States at all?

Mr. LESCH. Not from my office. We operate west of Ohio and south of Maryland.

The CHAIRMAN. Do you insure cotton?

Mr. LESCH. We do not; no, sir. In Illinois there were some counties that were considerably lower than the rate I have named.

Senator KEYES. Put in one showing a less rate.

Mr. LESCH. Here is Champaign County: Rye was 4 per cent; winter wheat, 4 per cent; corn, 3 per cent; kafir corn, 3 per cent; oats, 3 per cent; barley, 4 per cent; speltz, 4 per cent; spring wheat, 4 per cent. You see that averages from 2 to 3 per cent below Alexandria County and 1 per cent below Adams County.

Senator KEYES. Is that the most favorable county in the State?

Mr. LESCH. I think that is one of the most favorable counties in the State; yes, sir.

The CHAIRMAN. The rates that you read are the ones that are now in existence upon which you base your charge?

Mr. LESCH. Yes, sir.

The CHAIRMAN. Have they been increased in the last year or two?

Mr. LESCH. No, sir; but we have reduced the amount of liability we would assume.

The CHAIRMAN. In other words, that is done for the purpose of freeing you from the losses of the past?

Mr. LESCH. Yes, sir; freeing you from losses. We had a schedule of operations—originally when the plan was put into effect we had a schedule of cost which we used in arriving at the amount of insurance. For instance, plowing for grain was \$3 per acre; disking, per operation, \$1 per acre; harrowing, per operation, 60 cents per acre; rolling, 40 cents per acre; drilling, 90 cents; listing, \$1.25. You see they list corn.

The CHAIRMAN. That is corn you are now speaking of?

Mr. LESCH. This is a schedule of costs. For instance, if it was in wheat the operations that were not used would not be figured, but this was the schedule of costs.

Cutting small grain, \$1.50 per acre; shocking small grain, 70 cents per acre; twine, 60 cents per acre; heading small grain, \$2 per acre; harvesting with combine, \$3—combine is what they call a combined thresher and harvester; stacking, \$1.50 per acre; threshing, \$2 per acre; planting corn, 90 cents per acre; cultivating corn, per operation, \$1.25 per acre; seed varied, depending on locality and quality; land rental, 5 per cent of actual sale value, but not to exceed \$18 per acre.

Senator KEYES. The rates in 1920.

Mr. LESCH. This was the schedule of costs when we started in 1920.

The CHAIRMAN. That is based on the actual loss, trying to get at the farmer's investment?

Mr. LESCH. The investment. This crop policy was called a crop investment policy.

The CHAIRMAN. Have you abandoned that scheme?

Mr. LESCH. We have. We have reduced that.

The CHAIRMAN. Tell me why you found it necessary to modify your plan?

Mr. LESCH. Because if all operations were performed, if the rental value of the land were added, the crop would not bring what it cost to produce.

The CHAIRMAN. Did you have any difficulty in arriving at these calculations as to the actual loss based upon your schedule?

Mr. LESCH. No; because they were fixed. When the policy was written it became a valued policy upon this basis.

The CHAIRMAN. I see. The schedule itself fixed the value of the loss.

Mr. LESCH. Fixed the liability.

The CHAIRMAN. Why did you modify the plan?

Mr. LESCH. As I told you, it was found that the crop, if made in accordance with that schedule, would not sell for the cost to produce.

The CHAIRMAN. That was because of the depression then existing in farm prices?

Mr. LESCH. Well, I do not know that it was entirely that, Senator. I am inclined to the opinion that there are a good many farmers that are successful, or so considered, that grow crops every year, and if the costs were estimated at what it would cost to hire everything done they would show a loss, but the farmer has three or four children around who can do a man's work at a great many things on a farm.

The CHAIRMAN. Now, what is your present plan of determining your loss?

Mr. LESCH. We limit the liability we will assume to \$10 per acre.

The CHAIRMAN. Do you mean that is in all cases the limit of liability?

Mr. LESCH. On grains \$10 is all that we will write.

The CHAIRMAN. How long have you been writing that form of policy?

Mr. LESCH. Two years.

The CHAIRMAN. Have you made any money on that?

Mr. LESCH. Well, we have written no business to speak of.

The CHAIRMAN. Well, that is better than taking a loss.

Mr. LESCH. It is much better. At the same time, you do not accomplish what you have set out to accomplish—stabilize the farm industry.

The CHAIRMAN. That is true.

Mr. LESCH. And because of our dealing so extensively with the farmer in our other departments, why very necessarily if he is not successful and making headway, our business is not progressing as it should.

The CHAIRMAN. Then the rates you gave a minute ago in Oklahoma and Texas apply to the \$10 per acre maximum liability?

Mr. LESCH. Yes, sir; we have reduced the liability.

The CHAIRMAN. And whenever it was 5 per cent, like it was in Illinois, that would be 50 cents an acre?

Mr. LESCH. Yes, sir; 3 per cent would be 30 cents an acre.

The CHAIRMAN. And you found no takers at that price?

Mr. LESCH. The only place we found any was in Illinois.

The CHAIRMAN. Do you do much business in Illinois?

Mr. LESCH. We wrote in 1922, \$200.12.

The CHAIRMAN. What prospects have you this year on the same policy?

Mr. LESCH. No better than last year.

Here is our only chance: As I said in this little statement, if we could get these cooperative organizations—could get them, for instance, all of them to insure, here are 100 farmers in the section who belong to some cooperative association, and if we could get them to insure all of them, why then we might get somewhere, but as a single-handed proposition, it does not appeal to the farmer.

Senator KEYES. Have you had any experience at all with cooperative organizations?

Mr. LESCH. We have not as yet; no. We are working on that and have a campaign on this fall.

The CHAIRMAN. Mr. Lesch, you believe this is as liberal a policy as your company can afford to offer for sale?

Mr. LESCH. I believe it is too liberal. You understand we have been trying to develop. If we could just get some experience in this better territory so we could tell what we could afford to do and what we can not afford to do, but we can not get it. We could get all the experience we want in western Kansas.

The CHAIRMAN. But you believe your company could make a fair profit under that contract in suitable States?

Mr. LESCH. Yes, sir.

The CHAIRMAN. And you think that in those States, using Illinois, Iowa, and Ohio as an illustration, you could not offer a better policy to the farmer than that one?

Mr. LESCH. That would be conjecture, Senator, but I think we could give a slightly more liberal policy in Illinois, because we did at the time when we were writing for the big amounts.

The CHAIRMAN. Tell me, have you sold the contract to the farmers in western Kansas?

Mr. LESCH. We sold one or two.

The CHAIRMAN. But upon an entirely different rate, I assume?

Mr. LESCH. Oh, yes; knowing that country on account of having—

The CHAIRMAN (interposing). Have you the rates there on western Kansas? I would be glad to know the difference.

Mr. LESCH. Here are all the counties in the State.

The CHAIRMAN. Give a few typical illustrations in western Kansas and eastern Kansas.

Mr. LESCH. Here is Cheyenne, Kans.—that is in northwestern Kansas—the rate on rye is 12 per cent; on winter wheat is 15 per cent; corn is 12 per cent; broom corn, kafir corn, milo maize, and fetterita, 8 per cent; oats, 12 per cent; barley, 13 per cent; spelts, 13 per cent.

The CHAIRMAN. Is western Kansas the territory where the hazard is the greatest?

Mr. LESCH. Yes, sir. Now in Lane County—

The CHAIRMAN. What part of Kansas is that?

Mr. LESCH. It is western Kansas I am giving you now.

The CHAIRMAN. All right.

Mr. LESCH. The rate is 13 per cent on rye; winter wheat, 15; corn, 12; broom corn, milo maize, fetterita, and kafir corn, 8; oats, 13; barley, 14; spelts, 14.

Now, do you want more of the western counties?

The CHAIRMAN. No; I think that is about typical. Now a couple of the eastern counties.

Mr. LESCH. In the eastern part of the State we have Atchison County; the rate on rye is 6 per cent—do you want me to make the comparison as I go along to show what the reduction is? For instance, in Lane it was 13.

The CHAIRMAN. No; we can get that from the record.

Mr. LESCH. The winter wheat is 5 per cent; the corn is 7 per cent; broom corn, kafir corn, milo maize, and fetterita, 7 per cent; oats, 6 per cent; barley, 6 per cent; spelts, 6 per cent.

Now, in Lynn County, which is another eastern county, rye is 6 per cent; winter wheat, 5 per cent; corn, 8 per cent; broom corn, 8 per cent; oats, 6 per cent; barley, 6 per cent; spelts, 6 per cent.

The rates vary between those two extremes.

Senator KEYES. Those were the rates for 1920?

Mr. LESCH. Those were the rates for 1920, 1921, and 1922.

The CHAIRMAN. And are the rates for the present year?

Mr. LESCH. Yes, sir. You see, we started making a change in the amount of coverage we would grant, trying to determine whether the fault laid there, and we thought we would continue with the form of coverage until we had exhausted our efforts there, and then perhaps we would have to take up the matter of rate. But there is, of course, a limit. You could not expect a farmer in western Kansas to pay a rate based on the experience which the company has had out there. It would be prohibitive. There is no form of policy, I believe, that could be written, no matter what the amount was, in western Kansas at the rates named that would let us come out even.

The CHAIRMAN. Do you operate in the Dakotas and Montana?

Mr. LESCH. South Dakota.

The CHAIRMAN. No farther north or west?

Mr. LESCH. Not in North Dakota, and we have not operated in Montana.

The CHAIRMAN. What have you to suggest to this committee in the way of immediate or necessary practical legislation?

Mr. LESCH. Of course, that would be conjecture on my part, pure and simple.

The CHAIRMAN. I thought maybe you had given that phase of the subject some study.

Mr. LESCH. I think I read that part of my statement while you were out of the room. I made reference to the accumulation of information through some of the Government agencies. You will find that in my statement.

The CHAIRMAN. Yes. I think that was the idea the committee had, and that view has been supported by most of those who have been here before the committee, and I am sure we will get such aid from your company as it can give us.

Mr. LESCH. At any time.

The CHAIRMAN. Senator, do you want to ask any questions?

Senator KEYES. None except this: You have not touched on the subject of hail insurance at all. I suppose your company writes hail insurance.

Mr. LESCH. Yes; we write a great volume of hail insurance.

Senator KEYES. And that is going on satisfactorily?

Mr. LESCH. Oh, yes; there is plenty of competition for that. I expect two or three of the larger companies—the Hartford and the Home, I guess—could take care of the United States on that.

Mr. DOYLE. How many companies write hail insurance?

Mr. LESCH. Something over 60.

The CHAIRMAN. Old line?

Mr. LESCH. Yes.

The CHAIRMAN. And quite a number of mutuals?

Mr. LESCH. Yes; I do not know how many of those. Then we have some State funds.

The CHAIRMAN. I think in the fruit section out on the coast from a point south of Seattle, Wash., into the Imperial Valley, Calif., would be a good field for general crop insurance. Of course, hail would not amount to much.

Mr. LESCH. I do not see why it should not be a good section. I think, however, they have out there—I have forgotten what the term I heard it called was—several years ago they had an unprecedented thing happen; they had a freeze.

The CHAIRMAN. Yes. I suffered tremendously. It destroyed a walnut grove. Of course, that was an unprecedented thing.

Mr. LESCH. Yes.

The CHAIRMAN. And I do not suppose you insure against the death of a tree—it is the crop you have in mind?

Mr. LESCH. Well, if we made a success of the crop, of course, naturally the next step would be to insure the tree.

The CHAIRMAN. But this frost only covered a small locality and was confined practically to northwestern Oregon and the extreme southern part of Washington, and the main destruction was to the walnut trees in the lowlands where there was not sufficient air circulation. That is where I was caught with a walnut grove. But they are building up new trees with the 11-year-old stumps, I think, with very great success.

But I am interested in the fruit industry out there generally, and there is a tremendous lot of fruit and vegetables raised in the country, and the similarity in the climate all the way down the coast, on account of the Japanese current, and the farming is intensive and on a large scale, and I think the latest cultural methods are employed there, more so than in any other part of the country, because we have received a great many eastern people with money who have come there largely for health and climate, who have spent their money lavishly to develop new theories, and I hoped that at some time mutual or private companies would get interested in the insuring of crops out in that country.

Mr. LESCH. We would be very glad to.

The CHAIRMAN. There you would not deal with the individual farmer, because there is no part of the country where the cooperative organizations so generally embrace all the farmers.

Mr. LESCH. I referred to that, I think, in my statement.

The CHAIRMAN. Yes; I heard a general reference to that.

Mr. LESCH. There would be a stronger probability of success attending our efforts there than if we should go out there to pick one man here and one man there, because we might get the man who, for some reason or other, did not have the especially desirable risk. If we got them all, why the law of averages would help us.

The CHAIRMAN. I have enjoyed your testimony, Mr. Lesch. It has been very interesting.

Mr. DOYLE. Mr. Lesch, I think possibly the committee would be interested in knowing how you adjust your losses on farm policies.

The CHAIRMAN. Yes.

Mr. LESCH. You mean on the crop policy?

Mr. DOYLE. Yes; this is exclusively crop policy.

Mr. LESCH. Under our table there any operations unperformed, of course, there would be no liability for. For instance, if your wheat was not cut, was not stacked, or threshed, those operations there would be no liability for; I mean under the old order here were liable only for the amount that the man had invested in his crop up to the time the loss was claimed or occurred. Under our new form or plan, which we are using now, we indemnify the man to the extent of so much per acre.

The CHAIRMAN. The total loss being \$10.

Mr. LESCH. The total loss being \$10. Now, if his loss is not \$10, he knows what his loss is. Suppose, for the sake of argument, he carries a policy of \$10 an acre and he gets only \$9 from his crop, we are liable for \$1 per acre.

The CHAIRMAN. Even though there has been no damage to his crop, but because a poor market?

Mr. LESCH. Well, you see on the \$10 there is no way on earth that you could get below the \$10 on a crop, a normal crop.

The CHAIRMAN. Let me give you an illustration. You except the germination of the wheat?

Mr. LESCH. Yes.

The CHAIRMAN. The grower plants his wheat and it germinates unbountifully here and there, and he only produces 7 bushels per acre and sells it for \$1.10 per bushel, and nothing came along in the way of elemental hazards to affect the crop, but it was simply an unfortunate stand.

Mr. LESCH. Yes.

The CHAIRMAN. You are not liable for a penny, are you?

Mr. LESCH. We do not insure those crops until they are up. We put that clause in there to protect us against misrepresentation, Senator.

The CHAIRMAN. You do not insure prior to the seeding?

Mr. LESCH. We do not insure prior to the time it has come up.

The CHAIRMAN. I thought maybe it was because you covered that proposition in your contract.

Mr. LESCH. We do that to avoid the possibility of misrepresentation to us.

The CHAIRMAN. Oh, yes.

Mr. Doyle, have you anyone else whom you want to have us hear? Mr. Marsh will be here in a moment.

Mr. Valgren, did you want to ask Mr. Lesch any questions?

Mr. VALGREN. I was interested in knowing if they have the same condition which Mr. Bissell described yesterday—Mr. Lesch was not here at the time—to the effect that they could settle either on the basis of yield or on the basis of price.

Mr. LESCH. We do not have that in our policy.

Mr. VALGREN. On which basis is your settlement—on the basis of value?

Mr. LESCH. Financial return. That is value.

Mr. VALGREN. Yes; I see.

Mr. LESCH. Just like a fire policy. If you have the loss you get the money.

The CHAIRMAN. Have you any further questions, Mr. Valgren?

Mr. VALGREN. No.

The CHAIRMAN. Did you want to make a statement at this point in regard to the testimony that has been collected in the last two or three days?

Mr. VALGREN. No; I think not. I was particularly interested in that double plan of adjustment described yesterday, which gave the company a chance in case the price goes up of settling on the basis of value return, and if the price goes down it is settled on the basis of yield return. In other words, replaces the amount by which the yield fails to come up to the amount specified in the policy.

The CHAIRMAN. You are now referring to Mr. Bissell's testimony?

Mr. VALGREN. Yes; and I was very much interested in finding—but this was a different plan.

Mr. LESCH. We have never had that in our policies.

The CHAIRMAN. Mr. Doyle, is there anyone else?

Mr. DOYLE. No; I think not.

The CHAIRMAN. Thank you very much, Mr. Lesch.

Mr. LESCH. Not at all.

The CHAIRMAN. Mr. Griffin, have you a word you would like to say after hearing the testimony of the witnesses?

Mr. GRIFFIN. No, sir.

The CHAIRMAN. Mr. Valgren, do you want to say anything on that point in Mr. Bissell's testimony to which you have just referred?

Mr. VALGREN. No; I think not. I was interested in getting the facts.

The CHAIRMAN. Do you want to cover any phases of this subject, Mr. Doyle?

Mr. DOYLE. No, sir; I do not think there is anything I can add to it.

I am satisfied the committee knows from the testimony introduced here that the stock companies in endeavoring to perfect a plan for crop insurance are necessarily groping around in the experimental stage.

The policy described by Mr. Bissell yesterday, whereby the company can take advantage in adjustment of adjusting on the basis of yield or on the basis of financial return was an endeavor to offset the tremendous losses which followed their initial operation of settling on financial value.

None of these companies have any plan that they are particularly proud of. Their rates are not scientifically made, and they are not based on experience. The companies are willing, however, to engage in this business even with the chance of loss in the initial stages, with the idea that later on, when the experience can be obtained, a plan can be perfected and put upon a self-sustaining basis. That, I am sure, the committee must have realized from testimony that we have tried to offer.

We have been more or less at a disadvantage. I might say that none of these gentlemen came down here with the idea of testifying before this committee. They came down with the idea of getting the benefit that might be derived from the statements of those who have made a study of crop conditions almost exclusively. That was the class of people we rather expected to be here. Our folks are engaged in a general line of insurance, and have not made a special study of this exactly, except for the last few years, and then it has resulted disastrously in their attempt to cover this business.

The CHAIRMAN. Mr. Doyle, the committee appreciates very much the help that you and the others have given us. It is a new field. You can not find anyone who can speak with an authoritative voice on the subject. We have had the strongest man in the department, Mr. Valgren, here. We have had the testimony of Mr. Bissell, whose company has gone into it extensively; we have had the testimony of Mr. Griffin, whose company has had the longest experience in the hail insurance business, and the testimony of many others. Now, we are going to-morrow to have some of the heads of farm organizations, who are interested in speaking of the desires and the interests of the farmers generally. We are not going to conclude the hearings this week. We will perhaps adjourn to-morrow to some early date in December, and we will in the meantime go over the record, find out what has been omitted, find out, if we can, little pieces here and there to fill in those omissions, and will again assemble and hear further testimony.

There are some of those from States like Dakota and Montana and Wisconsin and Minnesota, where they have tried hail insurance under the auspices of the State, who will be here in the fall. They are too busy in the seeding time to get away at this hearing.

I think we are all agreed on this proposition, that this is a new field, and there are not many blazes along the trail, but that eventually through study, encouraged by the Government in cooperation with the States and by you people, mutual and farm organizations, and commercial organizations of the country, we can collect sufficient data and segregate it so that it will be practical to extend the field of operations into various crops to cover various damages. That is a step in the right direction, and that some one ought to go forward with, and this committee thought it was a wise venture, at least.

Mr. DOYLE. I am sure you will have an appreciative audience whenever you have your hearings, because I think all these gentlemen would be very glad to come back.

The CHAIRMAN. I thank you, and we will give ample notice of the hearings.

Mr. Marsh, who is manager of the Farmers' National Council, located in Washington, D. C., is here. Mr. Ben C. Marsh.

STATEMENT OF MR. BENJAMIN C. MARSH, REPRESENTING THE FARMERS' NATIONAL COUNCIL.

The CHAIRMAN. Mr. Marsh, you are well known to Members of Congress, but let the record again show your address and occupation and what organization you represent.

Mr. MARSH. Mr. Chairman, my full name is Benjamin C. Marsh. I am managing director of the Farmers' National Council, with headquarters in the Bliss Building here in Washington, and I want to say that the Farmers' National Council has not made a definite pronouncement on the subject of what form of crop insurance we should have, and in making my suggestions this morning to this committee it is not in the way of final suggestion, but of lines of inquiry which we think could be made, and could properly be made, and should be made, in finding out what sort of crop insurance is most practicable.

We recommended to the Joint Congressional Agricultural Inquiry Committee, of which you were a member, Mr. Chairman, that Congress should make such an inquiry as you are now making, and we are very glad that you are doing it. It is very evident that great minds move along the same channels.

I would like to emphasize the difference—and I will be very brief in this—between the average farmer and the business man, particularly the larger business man, and I do this because I am going to make some suggestions which may be regarded as a little bit advanced—suggestions for investigation.

The farmer in this country is partly a result of our economic conditions. When there was industrial unrest, the Government said, "Go out West and hew out a home for yourself and develop the country," and he went.

The Secretary of Agriculture announces that last year 2,000,000 of the farm population left the farms. I talked with literally thousands of farmers all through the Northwestern States, including your own State, Senator McNary—I have been in New Hampshire only a little, Senator Keyes, and I do not know so much about the East—but it is quite clear that with a few exceptions the farmer is sort of between the devil and the deep sea. If he produces a good crop—I mean a large crop—he can not get the cost of production ordinarily with present marketing conditions. If his crop is wiped out, he has no chance to break even.

I understand that the Department of Agriculture has figures ascertained in an investigation, the results of which it has not yet made public, showing the proportion of farmers in the Northwestern States who have lost their farms. You do not need a very expensive investigation to know that a very large proportion have lost their farms or will lose them this year.

Now, it seems to me that the farmer differs from the business man, and that the farmer has to take certain risks over which he can have no control, and, further, that the farmer can not adjust his production to a prospective effective and profitable demand, because whether an acre of wheat will, let us say, produce 5 bushels or 14 bushels, is not entirely within the control of the farmer who planted that wheat.

Now, we are trying to meet the farmer's situation as to marketing through a measure which was reported out by the Senate Committee on Agriculture, of which both you Senators are members, and also by the House Committee on Agriculture, for a Government corporation, known as the Norris-Sinclair marketing bill, creating a corporation which will be a sort of shock absorber, a corporation to buy farm products when the price is being hammered down by the speculators to a very low price, so that the farmer would not get the cost even, and to get a little more efficiency through that corporation into our system of marketing farm products.

Since Congress adjourned I have read most of the reports of the Joint Agricultural Inquiry Committee, and I am impressed with the wastefulness of our marketing system.

Mr. Valgren has been before you, Mr. Chairman, and members of the committee, and I am not sure whether he gave you the figures as to the loss from crop damage for the 11 years from 1909 to 1919. I do not want to repeat any information that he gave you.

The CHAIRMAN. No; he did not give it, but I think I read that into the record from the very same article you have there, Mr. Marsh.

Senator Keyes. It went into the record, I am sure.

Mr. MARSH. I do not want to repeat it, then. I understand that article is based on the bulletin of the Agriculture Department No. 1043; that is, most of the figures are taken from those official publications of the Department of Agriculture.

Mr. Valgren is here and will correct me if that is not right.

The CHAIRMAN. That is correct, is it not, Mr. Valgren?

Mr. VALGREN. Yes; it is a summary of that bulletin.

The CHAIRMAN. I find I did not put that all in, Mr. Marsh. You might put in the balance.

Mr. MARSH (reading):

"Translating the above percentage into quantity figures, it means that the average annual damage from all causes on the crops in question amounted to the following figures: Corn, 1,345,600,000 bushels; wheat, 301,200,000 bushels; oats, 414,300,000 bushels; barley, 74,100,000 bushels; flaxseed, 10,200,000 bushels; rice, 7,400,000 bushels; potatoes, 164,800,000 bushels; tobacco, 296,300,000 pounds; hay, 20,414,000 tons; cotton, 3,731,000,000 pounds.

"It has also been calculated that on the basis of prevailing prices during the different years the annual damage to these 10 crops amounted to a total sum varying from a minimum of \$2,054,000,000 in 1912 to a maximum of nearly \$3,066,000,000 in 1918, the average annual crop damage during the 11 years, 1909 to 1919, being \$2,620,000,000."

I would like to state that for the 11 years that means over \$28,000,000,000 loss.

We are being told by Roger W. Balson, who is more or less of a statistician and a very astute economist, that we have 25 or 30 per cent too many farmers, and that we are producing too much in this country. I want to challenge that statement, because I think it has a direct bearing upon whether or not you want to insure crops whether you want so many farmers, and it seems to me quite clear we do need as many farmers as we have in the United States. For instance, the Secretary of Agriculture in his report for 1921 says—and I would like to quote a few lines that bear directly on this:

"Had some way been found for the people in need to buy our surplus at prices which would cover the cost of production [he is referring to farm products of American farmers] the American farmer would have been prosperous and the country would have prospered with him. It is a terrible indictment of modern civilization that with such abundance here there are millions of people overseas suffering for the bare necessities and other millions starving to death. And surely we are sadly lacking in our understanding of economic laws or in our adjustment to them when the production of bounteous crops grown by the hard labor of 12,000,000 farmers and farm workers and their families, is permitted to play such a large part in paralyzing our industries and business at home. For that is what has happened."

Now, in your report, that is the joint agricultural inquiry, Mr. Chairman, you point out—that is, of course, my conclusion from your figures, deduction from your figures—that the domestic consumption of wheat in the United States fell off in the one year 1919 to 1920 approximately 230,000,000 bushels, about one-third, or 2 3 bushels per capita.

The CHAIRMAN. I think, as I recall our report, it would be from 7 bushels per capita to 4 1/2 bushels.

Mr. MARSH. From 6.9 bushels to 4.6 bushels per capita, one-third exactly, were your figures, Mr. Chairman. And needless to say, our population did not decrease, nor did the needs of our people decrease.

Looking further into the figures which you prepared and the Department of Agriculture's figures, we find that the consumption of meats in this country fell off from 1907 to 1920 over 25 pounds per capita, which means two and one-half billions of pounds reduction in the annual consumption of meats. If we consumed as much milk per capita in the United States as was consumed in Germany before the war—1913 are the last figures the Department of Agriculture gives—we would consume 6,520,000,000 more quarts of milk annually than we actually do consume.

I was appalled by these figures of the Agriculture Department, their official figures. If we accept these figures without interpreting them, our conclusion, it seems to me, would be, "Well, let the stuff go to pot and let it be lost, because we can not consume it." I would like to add the Department of Agriculture's statement about cotton, at our consumption of cotton fell from 1916 to 1918, our domestic consumption, a little over one and one-half bales per 1,000 population, which means, of course, a reduction of one and a half million bales of cotton, domestically consumed.

But the point is that we could increase in the United States our consumption of most farm products—I say most, not all; probably about 50 per cent—and there is absolutely no conception, no appreciation of what the world would consume if we could abolish militarism and navalism.

As you are aware, the Department of Commerce and the Department of Agriculture are jointly making inquiry as to foreign demand for farm products. I have seen Mr. Julius Klein, Director of the Foreign and Domestic Commerce Bureau of the department, and talked with other men in direct charge of the investigation, he having supervision of it, and have urged them to make an investigation of what farm products the people of the world really need, taking into account climatic conditions and their temperaments, etc., to maintain a reasonable standard of living, and they are going to ascertain those facts if feasible.

But as Mr. Wallace has said, we know there are millions and millions, I think we can say conservatively, scores of millions of people who are underfed throughout the world, and a great many millions who are starving.

Now, for our own country, we could probably, I repeat, increase our consumption of most farm products from 25 to 50 per cent. We could not as to cotton, probably. That is at present our largest export farm product. We certainly could at least come up to the level of the domestic consumption of wheat during 1919, which would mean roughly 200,000,000 or 225,000,000 additional bushels of wheat.

We are not drifting anywhere, as far as I can see conditions in this country, toward what is sometimes designated as socialism, but we are fortunately recognizing certain more general responsibilities of Government. If the farmers are wasteful through this crop damage, they certainly have not any monopoly of being wasteful.

In this little pamphlet, the Challenge of Waste, by Mr. Stuart Chase, the following figures, practically all of them from official Government reports or from the reports of the Federated American Engineering Societies, shows that our industries to-day are somewhat wasteful. Engineers and statisticians have estimated excess capacities in various industries as follows:

Men's clothing, 30 per cent; printing, 50 per cent; boots and shoes, 40 per cent; metal trades, 40 per cent; copper and brass, 35 per cent; blast furnaces, 40 per cent; woolen spindles, 28 per cent; lumber mills, 67 per cent; brick, 20 per cent; cement, 25 per cent; shipbuilding, 60 per cent; carpets and rugs, 40 per cent; simple average, 40 per cent.

Most of these figures are from official documents of the Department of Commerce or Senate Document on Reconstruction published in March, 1921. That gives the figures as to brick, while the Department of Commerce gives the figures 60 per cent excess capacity in shipping plant. Of course, these figures may not be absolutely correct. The real question is in every nation not overproduction so much as the unfortunate underconsumption. The world will have to end militarism and navalism, and we have got to have a readjustment of income in this country and in every foreign country before we can utilize what we do produce, and certainly before we will very largely increase our consumption.

Now, it seems to us that in making this investigation as to crop insurance we do not need to be alarmed by the charge of overproduction of farm products. One thing is certain, that if it is worth while to plant these crops at all they should be saved, and I would like to suggest the following lines of investigation.

Of course, crop insurance is an actuarial problem, not a matter of guesswork. It is an actuarial problem as to rates and it is an economic and human problem.

We would suggest that the investigation cover the points whether the crop insured must not be economically sound and adapted to the territory.

Needless to say, no one would suggest raising bananas in Oregon.

The CHAIRMAN. That might be possible.

Mr. MARSH. Well, in hothouses, but it would be an uneconomic production.

We would like to have the committee investigate whether any private concern can insure crops, and I mean insure them against the owner or the planter losing anything from any cause over which he as an individual has no control—hail, drought, excessive moisture. You were given statistics the other day as to the causes of the various crop losses. It may be possible that some private organization can do that—some insurance company. But we would like you to inquire whether this insurance should not be met—the expense of it, whatever expense there may be in paying for crop loss, should not be met by the Federal Government chiefly, by State governments, and probably county governments. In other words, what sort of an allocation of the cost of this should be made.

And we would also suggest that you inquire as to what percentage of the premium for such insurance the individual farmer should himself bear.

Of course, in suggesting Government insurance one has got to be practical and realize that if you can make a far-off government responsible for losses which the individual incurs, there is a certain tendency on the part of most of us—and I will plead guilty to that myself—to be not quite as careful as I might be if, to use a slang expression, it were entirely my own funeral, if I had to assume the entire responsibility; but that there is absolutely nothing clearer than that the individual farmer in many districts throughout the Nation is to-day taking risks that it is inhuman and unfair to ask him to take. The public that consumes farm products says to him, "Now, Mr. Farmer, heads I win and tails you lose." That has been the farmer's situation.

I was in London for several weeks in December, 1912, and January, 1913, when there was a vigorous discussion over old-age insurance and a very vicious attack was made by some of the parties against the principle involved in the government old-age insurance, including health insurance, of course, on the ground that it would end the individual responsibility of the British citizen and interfere with the work of the cooperative and private beneficial companies. Well, that was adjusted. Some were taken in, and served as agencies of the British Government in this health and old-age insurance scheme. And very probably in the insurance against crop loss in this country, in addition to having the individual farmer pay something, and every farmer, the Government agencies could utilize existing farmers' cooperative insurance companies and perhaps operate through them.

The CHAIRMAN. Let me get this clear in my mind, Mr. Marsh: You do not suggest the projection of the Government into the insurance business as such, the Government paying the loss, but you want the Government and the State in which the farm is located to pay a portion of the premium permitting the farmer to take his insurance in mutual companies and old-line companies, is that your line of thought?

Mr. MARSH. In part, Mr. Chairman, but not completely. As I said in the beginning I do not feel that we have enough data so that I would on behalf of the council be authorized to make, or want to make, any definite statement as to the policy, but I believe these lines of inquiry ought to be investigated.

I think, however—in fact, I know—it would be the opinion of most of our farmers of the organization in the Farmers' National Council that the Federal Government ought to pay a large part of the cost of insuring these crops for the obvious reason, it seems to us, or for a reason which I may cite, that the supply of food is a national problem. There are relatively few crops raised which do not enter into interstate commerce.

I analyzed recently the returns of the Commissioner of Internal Revenue and I found that the seven industrial States of California, Illinois, Massachusetts, Michigan, New York, Ohio, and Pennsylvania had about two-thirds of the corporation income in 1920 and over one-half of the personal income. New York State alone, which, of course, meant largely New York City, reported over four billions of personal income, or about 17 per cent of the total net personal income reported for the United States.

Now, I have nothing against the rich folks in New York, as such, but they do not make their money in New York; quite a few of them there who make big money get it by getting the profit out of agriculture and trimming the farmer in the commerce of agriculture.

Senator KEYES. Mr. Marsh, does not that remark apply more to New York City than to New York State?

Mr. MARSH. Yes; I thank you for calling attention to that. I said New York State, largely in New York City. Yes; I mean New York City.

Now, if the distribution of food for the Nation is a national problem and not something the individual farmer can handle himself—he is doing something through cooperative organizations and cooperative marketing organizations in a limited way—the Government has got, and particularly the Federal Government, to improve the present outrageously wasteful methods of marketing, and we think you should investigate this subject, whether the Federal Government should assume a large part of the responsibility of crop insurance.

And the Government has got to exercise a certain degree of supervision over what crops the farmer plants.

I used an extreme illustration, such as attempting to raise bananas in Oregon, simply to illustrate that no government in its right mind would underwrite or insure against loss of a crop of that sort.

I do not know whether we are trying to produce some farm crops where it is unwise to do it and uneconomic, but I doubt whether that is general, but I call to your attention that the United States Department of Agriculture has an income of over \$37,000,000; that is the appropriation provided and, of course, Mr. Chairman, you made a splendid fight to maintain them at the figure which finally passed, and we are glad the department got those appropriations—this being, by the way, in addition to \$10,000,000 for special road items—it is quite clear, though, that though half of the Department of Agriculture's budget is spent for supervisory work, it can get a lot of data for you on this subject, and it seems to the farmers, who sometimes wonder, frankly, what the department does with all that money, that they should do it.

I am glad to see that Mr. Valgren is present. I have a very high estimate of his ability as a statistician, and he has done a great deal of research along this line for the farmers.

The CHAIRMAN. Appropos of your remarks, Mr. Marsh, it is the intention of the committee—Senator Keyes and I have discussed it frequently—to ask Congress to pass some legislation which will authorize, direct, and empower the expenditure of the necessary funds for the Secretary of Agriculture to collect more detailed data covering this whole subject. We believe, and I think you agree with us, that we have not enough data now, there is not enough extant on which to base a calculation or to point out the road we might follow as a country, or what should be expected from the old-line and mutual companies.

Mr. MARSH. Quite so.

The CHAIRMAN. Do you not think that about all we can do now is to go forward and make a study of this problem and, as the years go by and we get more stable, accurate information, we can build upon it?

Mr. MARSH. Quite so, and I am trying to point out just some of the lines of inquiry which we think really ought to be gone into.

The CHAIRMAN. I see. But let me ask you a practical question as to your suggestion—we all know that it is not good farming or good business to try to raise pineapples in New Hampshire, or, as you used the illustration, of raising bananas in Oregon, and I think myself, without specifying any particular districts, it is unfortunate that farmers are trying to raise grain in some of the territories of this country. They are not succeeding and I do not believe they ever will succeed on account of climatic conditions.

Mr. MARSH. In a few limited areas.

The CHAIRMAN. I am speaking of limited areas.

Mr. MARSH. Yes.

The CHAIRMAN. Would you advocate the denial of insurance to farmers who did farm in a country where it was uneconomical to farm? I want to get that point. You pointed your finger at it, but you did not discuss it.

MR. MARSH. I would make the taking of insurance, assuming the Government established a crop insurance scheme, elective or voluntary, with the farmer. If the farmer insists on raising crops which the Government thinks it is uneconomical for him to raise, then I believe that the individual farmer if he has faith and has confidence in his ability and the climate should pay a little larger percentage of the insurance than otherwise.

THE CHAIRMAN. It would not be a denial of the contract?

MR. MARSH. Oh, no.

THE CHAIRMAN. Simply increase the rates?

MR. MARSH. That is it; that the farmer should take a larger risk in justification of his own confidence, if the Government thinks it is uneconomical.

But I think with our present marketing conditions for the Nation as a whole, it would have been a calamity had all our crops been saved, because the farmers would probably be ruined to-day if none of these crops had been destroyed by conditions over which the farmer had no control. That is simply because our marketing system is so utterly inefficient and controlled by men who, as a whole, have relatively little sympathy for the farmer. There are exceptions, but as a whole.

THE CHAIRMAN. Mind you, Mr. Marsh, any form of insurance that might be written will not influence the yield of the crop; it will simply distribute the loss. That is all it is calculated to do.

MR. MARSH. I do not know to what extent these figures quoted mean an absolute damage, but let us take the average on wheat. The average annual damage amounted to 301,200,000 bushels. Now, I would like to be checked up if I am in error, but I take it that that meant the crop was about that much less than a perfect crop.

THE CHAIRMAN. Yes.

MR. MARSH. And if that had been saved and the crop for that year had been 301,200,000 bushels more of wheat the tendency would have been for the price to go way down to the bottom.

THE CHAIRMAN. I appreciate that, but I want to point out that if we had insurance on all the wheat the same quantity would have been lost.

MR. MARSH. Of course.

THE CHAIRMAN. But the loss would have been distributed over the whole yield, thereby stabilizing the industry.

MR. MARSH. Undoubtedly. But my thought was that by getting this system of crop insurance, we would develop methods of preventing such losses. To my mind, that would be one of the important things. They often say one of the important things about workmen's compensation is not that you let the workman lose his hand or his leg or be killed, but an important result is that it reduces the number of accidents. Now, I believe such a crop insurance will lead to more efficient methods of production.

THE CHAIRMAN. I think that is true, too, of course.

MR. MARSH. And that would be one of the by-products, perhaps, of such an investigation.

Now, there are one or two other points, and I will take but a moment on them. On what basis are you going to insure? On the basis of what the farmer might have had by the grace of God if his crop had survived the vicissitudes of nature and he got two-thirds of the cost of production? Or what basis? We would like this committee to investigate whether in this crop insurance it is not feasible instead of saying, "Here, this man lost 400 bushels of wheat and he might have had \$1.10—to be more accurate, somewhere around a dollar"—and we would insure him for that.

Now, that is less than the cost of production in most areas, according to the official figures. Is it not feasible to work out a system so that you take this farmer's product and say the cost of production has been so much, and no matter whether the price you will get will cover the cost of production, to insure him on the cost of production, plus a reasonable profit, for that is essential to permanently continuing to raise any farm products.

That, of course, is another actuarial problem. Of course, it does involve the farmer keeping accounts and records of its cost, but it is the only sound basis for agriculture, and some of the gentlemen who have not run away with enthusiasm over this cooperative movement of farmers say very frankly that at least a general knowledge of what the farmer is spending and the cost of his operations is essential whatever system of marketing you have, whether it is cooperative or other, but we suggest that you investigate whether the insurance should not be promoted to the loss and provide only for causes over which the farmer has no control himself, those to be determined.

THE CHAIRMAN. Let me ask about this. We have had some interesting testimony, and some of the companies which have had the widest experience in this field of

insurance are issuing and selling what they call valued policies, based upon a maximum liability per acre. You get that thought?

MR. MARSH. Yes.

THE CHAIRMAN. \$10 an acre or \$15 an acre. You would have a nonvalued policy, where there would be no maximum liability, but the indemnity to be paid would be dependent upon the value of the crop plus a fair profit.

SENATOR KEYES. The cost of production.

MR. MARSH. The cost of production of the crops.

THE CHAIRMAN. Yes; the cost of production.

SENATOR KEYES. Plus a profit.

THE CHAIRMAN. That is, the actual investment the farmer would have, including taxes and interest on his investment, I assume, as well as the labor.

MR. MARSH. Yes; the necessary costs.

THE CHAIRMAN. And the cost of the planted crop.

MR. MARSH. Yes.

THE CHAIRMAN. Plus a fair profit. That would be the measure of the liability?

MR. MARSH. Well, I suggest an investigation of whether that is not practicable.

THE CHAIRMAN. I want to get whether that is your thought.

MR. MARSH. Yes; that is the thought, and perhaps the most valuable contribution to our farm organizations would be after you assembled this data that we have a chance to study it and then, after studying that, make our recommendations as to policy.

THE CHAIRMAN. Here is a question involving the human element, Mr. Marsh: Would the average farmer who had a policy covering the cost of producing the crop plus a fair profit be as prudent, provident, and cautious as he would be if he could only recover a certain estimated value placed upon the crop, which he knew would be under the cost of production?

MR. MARSH. Well, you have asked me an X quantity question. It is a difficult question to answer. You could not make a general answer. But I would put it this way: What right has a nation with the wealth of our Nation to ask any individual farmer, his wife, and children to undertake to supply an essential to existence, such as food, on any other basis than assuring him that if he exercises reasonable but not superhuman thrift, energy, and intelligence and takes the suggestion of the Department of Agriculture as to what crops to raise and adopt reasonable methods—you can not expect them to just tickle the soil with a plow, or with a tree, the way they do in some parts of Asia, for instance—but a man who exercises reasonable thrift, ingenuity, and intelligence ought to know he is going to get a fair price for his crop. Otherwise, very frankly, how can we expect people to farm?

I am not asking a subsidy for farmers, and I started out with saying the point you stress of individual responsibility has got to be emphasized, and he has got to contribute something, at least. I believe in that. But it would be manifestly unfair for the consumers of food products in this country to say "Let him continue taking the risk, as he always has done," because in my judgment—and I have talked with probably as many farmers as most people in the United States—the farmers say, "Them days have gone forever," when he is just going to produce and take a slight chance of breaking even.

I do not know what *pro rata* you will establish, or how it will work out, but I would like to mention this, Mr. Chairman, very frankly, in considering costs of production for farm products as the basis for insurance, the question whether you ought to include a 4 or 5 per cent return on farm land that has been speculated in very, very heavily.

Now, one of the astounding facts brought out in your report, the first volume of your report—

THE CHAIRMAN. Inflated land values?

MR. MARSH. Yes; I am afraid I haven't it here.

THE CHAIRMAN. I understand what it is.

MR. MARSH. Well, the Census Bureau writes down the increase in the selling price of farms in the decade 1910 to 1920, at, roughly, including irrigation and orchards, \$26,500,000,000. You accept the figures of Doctor King that the increase in the selling price of farm lands due to investments or efforts by the owners, was only about \$3,017,000,000 instead of 26½ billion. Now, how accurate either of those estimates is I do not know, but the disparity is such as to call attention to the obvious fact that the American farmer who speculates in farm land is not doing himself any good and, naturally, you are going to run up against the consumers on this question of insuring crops.

They will have to pay some of the taxes. I spoke last Thursday night at the Central Trades and Labor Council of greater New York and vicinity, and I spoke at Philadelphia on Sunday at a similar meeting, and I just generally referred to this joint responsibility to the farmer and I think you will find they are quite favorable to the Government extending more practical help

to the farmer than has been heretofore extended, and perhaps partly for this reason: There are between seven and eight billion dollars of long-term indebtedness out against farm values. This is largely invested by insurance and savings companies—about five hundred millions, roughly—by the Federal Farm Loan Board, and, roughly, \$7,000,000,000 by the insurance companies and savings institutions. Speaking of this in a town where there were two companies, I told them very frankly that if the farmer can not get a fair price and can not come out even, those depositors and policyholders who are largely city folks themselves, are going to lose a lot of money, and I do not know but it will be a recoil of judgment, because they loaned rather vigorously in some seasons of active and most uneconomic speculation in farm lands.

I just refer to that because the overwhelming majority of farmers are victims instead of beneficiaries of speculation in farm land. Of course, that matter is gradually adjusting itself.

There are only two other points. Naturally we do not suggest that any crop insurance should cover recouping the farmers for losses which they sustain by low prices for the crops which they actually sell. Perhaps you will investigate this. But it seems to us that that is more a marketing problem and rather more distinct than the matter of insurance for crop losses, and can be improved by improving our marketing system with the assistance of the Government and farmers' cooperative marketing organizations, which is of greatest importance.

Well, that covers the main points. Now, these suggestions of ours, Mr. Chairman, are of course for lines of investigation. When you get these figures together, I think all of us will want about a month to study them over, but we would ask you to study carefully whether the combination of Federal, State, and county insurance, those three governmental divisions to meet most of the expense, together with a certain proportion to be met by the individual farmer, is not the fairest way to meet this problem, which is a national problem and not a North Dakota problem, or a Mississippi problem, or an Oregon problem, or New Hampshire problem, but a national problem, and we shall await the result with great interest.

The CHAIRMAN. Mr. Marsh, the committee is very thankful to you for your contribution. We will after hearing other heads of farm organizations perhaps not meet again until December. That will give you and others an opportunity to read the record and study the matter and to come in more immediate contact with the members of your organization, and very likely in the fall you can contribute more of helpfulness to the general situation.

Mr. MARSH. Mr. Chairman, I am going to spend two or two and a half months this summer in talking at farm picnics, starting in Arkansas and going down into Texas and up in the Northwest, and I will talk this over with the farmers, because I generally talk for an hour and then listen for six hours.

The CHAIRMAN. Thank you.

We will stand adjourned until to-morrow morning at 11 o'clock.

(Whereupon, at 1 o'clock and 10 minutes p. m., the select committee adjourned until to-morrow, Friday, April 27, 1923, at 11 o'clock a. m.)

INVESTIGATION OF CROP INSURANCE.

FRIDAY, APRIL 27, 1923.

UNITED STATES SENATE,
SELECT COMMITTEE ON CROP INSURANCE,
Washington, D. C.

The select committee met, pursuant to adjournment on yesterday, at 11 o'clock a. m. in room 324, Senate Office Building, Senator Charles L. McNary presiding. Present: Senators McNary (chairman) and Keyes. The CHAIRMAN. The committee will come to order. Doctor Atkeson, we will hear you now.

STATEMENT OF DR. T. C. ATKESON, WASHINGTON REPRESENTATIVE OF THE NATIONAL GRANGE, 630 LOUISIANA AVENUE NW., WASHINGTON, D. C.

Mr. ATKESON. Mr. Chairman, after receiving the notice from Senator McNary of this hearing we sent a questionnaire to the masters of the State granges throughout the country, asking some questions with reference to the subject matter of this hearing. A number of those State masters have replied, and a larger number have not replied.

Without any further introduction I will read the three questions that we asked of these people. The first question is:

"Will you let us know if your State grange has ever investigated this subject, or participated in any way in any crop insurance enterprise; and if so, the results?"

This answer is from the master of the Pennsylvania State Grange:

"We have not."

Second:

"Anything you know about any other farm organization's activities in crop insurance?"

The answer is:

"The Farmers' Union in some of the Middle Western States have crop insurance, I am told."

Third:

"What privately owned or State owned facilities for crop insurance are available to the farmers in your State at this time?"

He answers:

"Very little crop insurance is used, except among tobacco growers."

That is in Pennsylvania. He adds a note to his answers:

"There is very little demand for crop insurance, other than for tobacco, and so we have not taken the subject up at all."

That seems to be the situation in Pennsylvania.

Mr. S. J. Lowell, master of the National Grange, Fredonia, N. Y., made this answer: "Our State grange has never gone into crop insurance, but I am quite sure a number of States have. I remember distinctly that Colorado had a crop insurance in some form. If you send copies to the various State granges you will get definite results. I am at a loss to know what the Government authorities are after, unless they think of going into crop insurance."

Mr. Leslie R. Smith, member of the National Grange executive committee and past master of the Massachusetts State Grange, writes:

"Your letter of April 14 is at hand. There has nothing been done about crop insurance by our State grange or by anyone else in our State, excepting a few companies have written insurance for hail in a limited way upon our tobacco crop, insuring the crop for \$150 per acre, which just about covers the labor cost. It has never worked out very satisfactorily."

That is for the large tobacco interests up there in the Connecticut Valley.

Mr. E. A. Eckert, master of the Illinois State Grange, writes in answer to our questionaire:

"Our State grange has never investigated the insurance problem, so far as I know. I know of some that have investigated it. The old-line companies write insurance on hail, but the cost is so high for our State that very few farmers take it."

Mr. J. P. McMullen, master of the Kansas State Grange, makes this reply:

"Our insurance company has written hail insurance on crops, but to my knowledge it was not a paying investment for our company, so we are writing hail insurance now under contract for the Lincoln Mutual Insurance Co., of Topeka, Kans. I will forward your letter to Mr. John R. Thorne, our insurance secretary, as he is in much better position to give you the information that you are asking for."

Mr. Thorne replies to our query as follows:

"Just to-day received from State Master J. P. McMullen your request of the 14th, too late to get you anything by the 24th. I am inclosing a copy of our application for grain, hay, and live-stock insurance for any number of months up to 12½ a five-year application."

"Our experience at our low rate is that we just about come out even. We write large volumes of grain insurance each year against fire and lightning."

This company mails copies of these two application forms. I do not know whether they will be of value to the committee or not, but if you wish to have them I will leave them with you."

The CHAIRMAN. We would like to have them filed with the committee, Doctor.

Mr. ATKESON. They are subject to the examination of your committee if you do not care to put them in the record.

Harry A. Catton, Master of the Ohio State Grange, writes:

"I dug into the matter somewhat up to the last day, thinking I might uncover some data that would be of some help to you."

"The only crop insurance I could unearth was quite a bit relative to hail, especially in vegetable and greenhouse centers."

Those are all the replies that have come in up to this time.

Like Mr. Lowell, I have wondered a little what the purpose of this investigation was, and after reading this brief article from one of the city papers I am wondering if this states what is in the mind of the committee, or of the Senate, in connection with this investigation. I do not recall which one of the papers this clipping is from. The article reads:

"Crop insurance, under which the farmer will be able to recover a reasonable proportion of his planting and cultivating expenditures in the event of his failure to make an average yield is on the nonpartisan farm-bloc program for passage at the next session of Congress, provided a satisfactory plan can be worked out. Senator Smith, Democrat, South Carolina, said last night."

"A special subcommittee of the Senate Agricultural Committee, of which Senator McNary, Oregon, is chairman, and Senators Keyes, New Hampshire, and Smith are members, decided yesterday to begin hearings on crop insurance the last week in April."

"There is a real problem in crop insurance," Senator Smith said, "and our purpose is to provide a method by which the Government, at small cost to the farmer, can insure him substantially all that he has expended in his effort to make a crop when he experiences complete failure, and to reimburse him a proportion of his expense when his production is not normal."

"The business man and substantially every one else can obtain insurance in his business except the farmer. He now can insure his crops against storm damage and can obtain insurance on his live stock, his home, and his barn, but in his real business of making a crop he must gamble with weather, pest, and everything else that mean success or failure. If we can work out some plan, as I think we can, by which his investments in making a crop will not be a complete loss to him in case of crop failure or a partial loss when he has a crop shortage, we will go far toward stabilizing the farmer."

I am wondering if that is a definite idea as to the purpose that was in the minds of the Senate or in the minds of the committee investigating this matter.

Senator KEYES. Apparently it was in the mind of one member of the committee, and I regret personally that he is not here to tell us more about what he did have in mind.

The CHAIRMAN. Doctor, that purports to express Senator Smith's view, though perhaps somewhat immaturity. The resolution speaks for itself. You have read the resolution. The field is rather a new one.

We all must realize that with a new proposition such as this, even though it contains a tremendous amount of merit, we can go forward with legislation only after

thorough study has been made of the various angles to be considered and collection of a great deal of data. The purpose of this committee and those who are interested in farm problems, as you are, is to stabilize farm ventures; and one of the best methods is, in my opinion, a practical scheme of crop insurance. But the Government has not sufficient data to project itself into that field. It is, of course, necessary to collect sufficient information before anyone can undertake the issuance of crop policies that will be fair to the farmer and safe to the investor, whether a mutual company or an old line or cooperative organization. That is what we are here for.

Mr. ATKESON. Our organization, which is now 10 years or more old, has had during that period more or less experience in various kinds of insurance. It has developed a quite successful life-insurance plan, and I think there has never been a failure in its cooperative life-insurance undertakings, and millions of dollars are carried in the cooperative fire insurance.

In some of the Western States some effort has been made, as the gentleman from Kansas indicates, to insure cooperatively against hail and cyclones and possibly some other disasters, and I am inclined to think that possibly North Dakota and maybe some other of the Western States have made some efforts at crop insurance by the State governments. I am not sure about what has been done in that particular.

It seems to me that crop insurance can be successfully operated through only one of three systems—or possibly all of the three. First, there is the cooperative system or plan, which rests entirely on the voluntary action of the farmers themselves. The much-abused word "cooperation" is made to comprehend a good many things, but as I understand it a cooperative insurance undertaking, like any other cooperative undertaking, is purely voluntary, and all the law can do is determine the legality of it and the powers and limitations of a cooperative undertaking in any kind of insurance.

Then we have, of course, the well-established system of insurance by corporations or joint-stock companies, such as prevails in connection with fire, life, and other insurance undertakings.

In addition to that, some people seem to have in the back of their heads the idea that either State governments or the National Government should provide this scheme that is indicated in the newspaper clipping that I read—that the Government should go into the insurance business, at least so far as the farmers are concerned. I do not know how prevalent that idea is, but it seems to me that in a general way one or the other of these three methods must be adopted, if any is.

I think we all agree that it is a desirable thing to do if it can be done safely and soundly and economically, as well as politically, for that matter; but it is perhaps better to bear the ills we have than to rush into some scheme that might involve unknown difficulties.

It is comparatively easy to insure a thing that is in existence, to work out some plan by which those who take the risk may determine the nature and amount of the risk they are assuming, as in life insurance, fire insurance, hail insurance, and frost insurance, but just how we can insure a crop that has not been planted yet is somewhat puzzling to me. Whoever assumes the risk must assume a risk that is highly moral and industrial, as well as financial. The people who plant in season and cultivate adequately and use proper fertilizers and proper protection against insects and fungus diseases and all the other calamities that may overtake a crop of a given kind must help to carry the load of the individual who fails to do those advantageous things. If a farmer is to be assured of getting the value of his crop anyway, he will be less inclined to spray in season to prevent the ravages of insects and fungus diseases and all that sort of thing.

So to undertake to do that before the crop is planted must lead us into a field of unlimited difficulties.

The CHAIRMAN. Doctor, much of what you say is true, but you are unmindful of the fact that experience has answered many of your observations. No companies write a policy before the crop is sowed. No one proposes to do that. There has been quite a little experience, according to the testimony of the insurance companies, and they do not do that. You are assuming a situation that does not exist.

Mr. ATKESON. The question is, what are we driving at? From reading the statement by Senator Smith it would appear to be to guarantee the cost of raising the crop in case of total failure.

The CHAIRMAN. We are not making the investigation on some one's statement that has no relation to the investigation. What we want is to follow out what we are trying to do, not what some one else has said.

Mr. ATKESON. I am trying to find out what you do want to do.

The CHAIRMAN. As I have said, the record is ample, and you have the resolution, as to the general purpose of the hearing.

Mr. ATKESON. I am only trying to indicate, if I may, some of the difficulties in the way of guaranteeing safely, by any system of insurance, that a man will harvest a crop. If we undertake to do that, I do not know just when the insurance would begin. Possibly it would be the day after the crop is planted, or possibly when it is partly cultivated. Probably you gentlemen will be able to work out some scheme—

The CHAIRMAN. There again, we are not trying to work out a plan that will insure a man a crop, or that he will harvest his crop. We do not want to insure a man a profit; we are not considering that. But it is hoped that some agency might be devised whereby, in case there should be damage to a growing crop, the man would not suffer the total loss of his whole year's effort and his capital. No one wants to give a farmer a bonus and say, "Here, you can have it whatever you do," and then turn him loose. As that is not the theory upon which we are going.

Mr. ATKESON. As I said awhile ago, it is a desirable thing if it can be worked out safely and soundly.

Leaving out the difficulties of the problem, which I am not much concerned about. I am confronted with the question as to who is going to undertake this risk or hazard which is involved in growing a crop. In the first place, with no insurance, the individual farmer takes it, of course. Whatever the risk may be, he stands to lose or win. That is one of the serious drawbacks to the farming business everywhere, more hazardous, perhaps, than any other business.

Now, if we undertake this insurance, if we undertake to guarantee to the farmer who incurs the expense of producing a crop and fails to get his crop because of drought or flood or frost or some other calamity, it is difficult to determine just what is a crop, because when we deal with averages we deal with a twilight problem.

Up to this time commercial insurance concerns have not found this line of insurance attractive. They insure live stock, because cattle or sheep or hogs are visible, and they know what they are insuring and can approximate its value. They will insure wheat in barns and in granaries and elevators because that is a visible, tangible problem. It is easy to adjust the insurance, and so it is provided for to a greater or less extent by insurance companies.

Efforts have been made along that same line by cooperative insurance undertakings and some of the farm organizations. They have not been very successful—I mean in insuring even the visible things, like cattle and wheat in the field and in the barns and in the granaries. There have seemed to be difficult problems involved, and cooperative insurance has not accomplished a great deal. However, it has been experimented with for half a century.

The other system is some kind of State or Government insurance, which for myself I do not even take the time to contemplate at all. It is unthinkable to me. I have no quarrel with the man who believes in it, however, but I can not get my mental processes around that conception. We would have a merry time if we undertook to adjust our Government officials and methods to the inspection and complicated problems involved in guaranteeing that the farmer will get at least a part of the cost of producing his crop when he loses it.

Maybe that is the way out, however. I have no quarrel whatever with the man who thinks that is the solution; and if that is the solution, why, then, we will all say amen to its accomplishment.

I think no one appreciates the importance of this problem more than I do, because I have been compelled to consider it from various angles. My own conviction is that if it is to succeed along the lines of safety and sound economics and efficiency and without involving paternalistic governmental activities, the solution is through some sort of cooperative insurance by which the farmers themselves in the aggregate will assume the responsibility and the administration.

In our experience with fire insurance we have reduced the cost as compared with the old-line companies, from 60 to 50 per cent. I am carrying my farm property now at the amount of \$6,000 or \$7,000 in a grange fire insurance company that has been in existence for about 35 years, and the cost has never approached half of what the old-line companies would carry that risk for.

We have cut out absolutely our overhead costs, except the quite small salary paid to the secretary of the company. Of course, there are little incidental costs where losses occur, in the adjustment of the losses.

There can be no more economic system of insurance than a sound cooperative system, and I am willing to work with anybody and everybody that can get together on a sound cooperative system of crop insurance. And perhaps we had better not go too far at first, but cover, for example, frost among the tobacco growers and the fruit growers or loss from hail, and expand and enlarge our efforts in the direction of complete crop insurance, and carry through a cooperative and voluntary undertaking of the farmers themselves, with such writing into the statutes as may be neces-

sary of the limitations and legal methods by which cooperative insurance undertakings may be operated.

I think I have told you all I know about this subject.

The CHAIRMAN. Your statement has been of very great interest, Doctor. The committee hopes by taking this up, in some way through legislative action, to direct the Secretary of Agriculture, through his various instrumentalities, to collect more detailed information regarding the various risks that are to be taken by those who might insure; to collect data regarding the damages and hazards; and when that is put in the possession of a cooperative organization, a group of citizens, or a private corporation that wants to undertake it, or a mutual organization, they will have something definite upon which they can work.

Mr. ATKESON. It seems to me that that needs to be done.

The CHAIRMAN. That is what we want to do, that much anyhow. And we hope that it can be done in cooperation with organizations such as you are the head of, and such as Mr. Silver is at the head of, and Mr. Barrett, and others, and with the State organizations, through their agricultural societies, county assessors, etc., so that in time to come we may understand every element involved. I am glad to know that you feel that is one thing that should be done.

Mr. ATKESON. That is fundamental; that must be done as a beginning.

STATEMENT OF MR. GRAY SILVER, WASHINGTON REPRESENTATIVE AMERICAN FARM BUREAU FEDERATION, MUNSEY BUILDING, WASHINGTON, D. C.

The CHAIRMAN. Mr. Silver, we are devoting this day to hearing from the heads of the national farm organizations. I think you are able to discuss this subject in your own way and without interruption, and I hope you will proceed as you see fit.

Mr. SILVER. I thank you, Mr. Chairman. I think the question of crop insurance is closely related to and a part of the general thought and effort toward stabilizing agriculture as a productive and safe business. The individual farmer, of course, is able to do many things. He can secure his land, and with the aid of the farm loan system can more readily do it than he could at one time. He can prepare his lands and plant them. He can build his necessary structures on it. Those things may be insured, and after he has secured a crop the completed crop can be insured.

However, there is a place between the planting and the harvesting, where there may occur such things as frost and hail and other hazards, that have not been fully or successfully covered, and yet it is very vital.

Now, the individual farmer acting alone can not bridge that gap—he can not carry his own insurance without undue hazard. He can not control the frost or the hail or the other hazards. This causes us to think about some method other than is now available to the individual.

Now, what is that? In carrying our buildings and completed crops we rely on insurance. Whether it be old-line insurance or cooperative, for the purpose of this discussion does not make any material difference. It is the protection that is the material thing.

Through the Department of Agriculture and other contacts between the Government and farmer, both individually and collectively, there should be, it seems to me, some way found of gathering such information as is necessary to determine safe averages, and that insurance could be found to protect those hazards. And with those hazards protected, and with the enlargement warehousing act which we now have, with the intermediate credit and the other things which Congress so kindly provided this last session, agriculture should be greatly stabilized and benefited.

When we think of it from the financial point of view, which is most important, the insuring of the crop during the growing and maturing stage is as important as the facilities to handle it when completed, for if you are not able to carry it through you have no need of the other facilities. It is only the crops that are carried to completion that you can have for the purpose of warehousing and distributing to the consumer at the time of need.

Then, again, the man who is just beginning to farm, or the tenant farmer, who does not have the resources behind him, who does not have a nest egg laid away for a rainy day, is confronted with a very serious situation when he is threatened with hail or frost or some of the other hazards that come.

Insurance is recognized as a proper charge against all other businesses, and in agriculture, so far as it has been developed, so that it is a very important thing to consider. And if it is recognized, as it is, as a proper charge it should be gotten on a basis such that it may be available not to a few farmers in a cooperative organization who write some insurance locally, but to everybody. To a limited extent some old-line

companies have written some crop insurance, and if my information is correct, to their unhappiness in the end as a result of not having sufficient information on which to base the risk.

I am fully convinced that there is just as much of a place for knowledge that will protect any crop as there is for the fire protection of a completed crop or in life insurance. And if that knowledge can be had we can find out the areas that are ordinarily covered by hailstorms; we can find out the damage that is ordinarily done. I am of the opinion that the insurance companies are not in shape to do it. I am of the opinion that the farm organizations alone can not do it. But working together, the Government agencies that have contact with the farmers, the farmers' organizations, the insurance organizations already existing, and perhaps others, can find a method by which when this tenant farmer or beginner risks his all, and perhaps borrows from his neighbor on an indorsement to plant a crop, he can be sure of growing that crop. For he will pin to his obligation which he may give to his banker friend a crop insurance certificate or premium that would insure him against the loss of the investment. It would insure him a profit on the crop or at least insure against the loss of the investment.

When these hazards are known, that charge can not be large as compared with what he has invested, in connection with securing the land, preparing the land, seeding the land, and perhaps cultivating the crop. It has cost him several dollars an acre to do that, and then he would need an additional charge of 50 cents or \$1 an acre, and that is a proper charge.

I trust that with the data that this committee will be able to gather and in the conclusion you may be able to reach in your findings the committee will be of the opinion that something can be done and will be able to suggest some helpful way of gathering the information needed to make it possible that these things be done. If you can do that it will be a great step toward stabilizing and making safe agriculture as a business. I thank you, gentlemen.

The CHAIRMAN. That is very interesting, Mr. Silver. I assume that your organization would gladly cooperate with other farm organizations and the Government and State officials in the collection of data and in making use of it after it has been gathered?

Mr. SILVER. We will very gladly cooperate in that way or any other way that we may be able to. I may say in that connection that we have organizations in some 2,700 counties, and that covers a large part of the country. We could be helpful, and will be glad to be helpful in any way possible.

Senator KEYES. Mr. Silver, is this a subject that has been considered very much by the various organizations connected with the Farm Bureau Federation in the different States?

Mr. SILVER. It has been discussed frequently, Senator. There is no consensus of opinion on just what should be done, but there is agreement in all minds that something should be done to bring about this desired thing. At some later time they may have some definite conclusion, which I will submit to the committee.

The CHAIRMAN. I was just about to make this suggestion, following Senator Keyes's statement to you. We will adjourn to-day, and will have this record printed, which I am sure will be very interesting and helpful, and then reconvene about the first week in December. Now, you gentlemen going around through the country, meeting those whom you represent, having read the record, may get some new information from personal contact, and it would be very helpful to this committee if you could sit down with us some time in December and give us the benefit of the information that you have gathered during the summer and fall. We hope that you will keep that in mind.

Mr. SILVER. Mr. Chairman, if there is some way by which we could get sufficient copies of the printed record to send to our county organizations, we would be glad to do it.

The CHAIRMAN. I will get an order for as many as are needed. I think we have all recognized for years that it is going to be one of the great stabilizing factors in agriculture. Every other human activity is protected except the farmer's and of all he should be protected, because he has the greatest risk.

Mr. SILVER. Yes; and hazards over which man has no control.

The CHAIRMAN. Certainly. So if we will all go ahead and collect data and information, I think it would be most helpful to everyone, and I am glad that you will be with us in December and tell us more about what you find to be the views of the people whom you represent.

Mr. ATKESON. Our organization meets in its annual session early in November; I do not remember the date.

The CHAIRMAN. Where do you meet, Doctor Atkeson?

Mr. ATKESON. We meet this year in Pittsburgh. Last year we met in Wichita, Kans.

It is my impression that that is likely to be one of the most important problems which will be considered in that national assembly—some plan of crop insurance. My thought now is that it will be along cooperative lines.

At any rate, I will see that they do deal with the problem, when we have this conference of minds from 35 of the States clear across the country. North Dakota, South Dakota, Colorado, and some other of the Western States have been doing some things that we have not been doing in the East. Then if Mr. Silver and his organization and other people, will grapple with the problem, we can have a conference here. Mr. Silver, your meeting is when?

Mr. SILVER. The second week in December, in Chicago.

The CHAIRMAN. We have until January.

Mr. SILVER. This subject is one of the subjects that we will have to discuss at that time.

The CHAIRMAN. That will be fine. I have an extension of time for the committee to report until April, 1924, and that will give us ample time to consider it after your organizations go on record. We will be very grateful to you gentlemen.

Is Mr. Loomis here?

STATEMENT OF MR. A. M. LOOMIS, SECRETARY NATIONAL DAIRY UNION, 630 LOUISIANA AVENUE, WASHINGTON, D. C.

Mr. LOOMIS. Mr. Chairman, it suggests itself to me to add one thing to what I heard here, and that is that while I represent a branch of the dairy industry which does not come in contact with this problem at all, yet my familiarity with the dairy industry leads me to suggest that live-stock insurance belongs in here too.

The dairyman is much interested in this. He carries a considerable risk in losses from diseases, both affecting the life of his dairy animal—tuberculosis and other diseases—and in particular what is at the present time a very acute problem of the dairy industry, contagious abortion. That affects the propagation of his herd, and strikes at the very heart of his industry.

I will confess that how this can be covered by insurance is very largely beyond me. I know that some of the old-line insurance companies have done a good deal with live-stock insurance, but I do not think they have ever covered the problem of contagious abortion at all. It seems to me, however, that that comes within the scope of the consideration of this committee, and that is the only suggestion I have to offer. The CHAIRMAN. Yes; I know we discussed that in carrying the appropriation in the annual supply bill.

Mr. LOOMIS. The Department of Agriculture undoubtedly could provide quite a lot of data as to what the risk is in both of those problems.

The CHAIRMAN. May I ask you this, Mr. Loomis: Do many of the old line companies carry live-stock insurance?

Mr. LOOMIS. I do not know enough about that end of the business to answer that question. I have had some experiences with one of them only, and I do not believe that they see fit to carry it very far.

Senator KEYES. Can you tell us anything as to how far they do go?

Mr. LOOMIS. There has been a system of protection of live stock from accidental death and death from certain diseases.

The CHAIRMAN. Do the mutual companies operate in that field to any extent?

Mr. LOOMIS. None that I know of. I have not anywhere near enough information to answer those questions, however.

The CHAIRMAN. Well, you believe that we should go ahead and create some agency, or encourage some agency to collect facts and information?

Mr. LOOMIS. I am much impressed with the proposition you have suggested here, of asking the responsible Government departments to get the information which will lead to definite knowledge of the risk involved—which is, of course, a necessary basis for going ahead with the whole proposition.

The CHAIRMAN. Mr. Doyle, may I ask you this? Your name and address appear in the record, as attorney for various companies: Do any of your companies carry live-stock insurance?

Mr. DOYLE. Yes; one of our companies does quite an extensive live-stock business.

The CHAIRMAN. What company is that?

Mr. DOYLE. That is the Hartford; that is, a subsidiary company—not the Hartford Fire, but the Hartford Live Stock.

The CHAIRMAN. Will you discuss briefly what you are doing along that line?

Mr. DOYLE. That is not the only company; there are a number of live-stock insurance companies. I suspect, however, they do not attempt to care for the potential life of live stock, but really only insure those actually in existence. But they do insure against death from any cause. And that being a branch of insurance which is not subject to any extensive conflagration hazard, any large company can carry a tremendous volume of that business.

The CHAIRMAN. Does that cover the diseases that are causing so much mortality among cattle?

Mr. DOYLE. That covers death from any cause.

The CHAIRMAN. Do you know what the rate is, and at about what value they insure?

Mr. DOYLE. They agree upon a value of the animal. If it be a racehorse worth \$100,000 they will write a policy for \$100,000 on that particular horse. If it be a herd of cattle they may have an average value for each animal in the herd. However, when the value gets above \$100 they usually specify the animal they insure. Then they insure that animal against death from any cause whatsoever, for an annual period. I think they never take it on a term period. As they include any other coverage and various other elements of hazard the price increases. It is rather expensive.

The CHAIRMAN. And not generally used?

Mr. DOYLE. Not generally adopted; no. Thoroughbred cattle and especially valuable animals, of course, are usually insured. A valuable racehorse, or a thoroughbred colt, or a prize winner is always insured.

The CHAIRMAN. And a selected dairy herd would be in that class, of course?

Mr. DOYLE. Yes; I suppose a great many of them do have insurance.

The CHAIRMAN. And of course common range cattle would not come within that class?

Mr. DOYLE. No; that is true.

The CHAIRMAN. I thank you, Mr. Doyle. Is there anyone else present that desires to be heard this morning? [No response.]

(Thereupon at 12 o'clock m. a recess was taken until 2.30 o'clock p. m.)

AFTERNOON SESSION.

The committee resumed the hearing at 2.30 p. m., pursuant to recess.

The CHAIRMAN. This afternoon the first witness to appear will be Dr. H. C. Taylor, head of the Bureau of Agricultural Economics. Doctor, the committee is making a study and trying to collect some facts concerning insurance of farm crops. You are the head of the bureau which has to do with the collection of market reports, I believe?

Doctor TAYLOR. Market reports and cost of production and farm finance, and about 15 other divisions.

The CHAIRMAN. I recall that in the Supply bill of this year we placed that all under the head of Agricultural Economics.

Doctor TAYLOR. Yes. Crop estimates, farm management and marketing are all organized into one bureau now.

The CHAIRMAN. And you are chief of that bureau?

Doctor TAYLOR. Yes.

The CHAIRMAN. What we wanted to talk with you about was what avenues you have for the collection of such data as necessary in order to properly determine the risk in the question of farm insurance, and such available data as would be essential to have if companies desire to engage in it, and how helpful you could be in your department in the collection of further information. We will be glad to hear from you, Doctor.

STATEMENT OF DR. HENRY C. TAYLOR, CHIEF OF BUREAU OF AGRICULTURAL ECONOMICS, DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

Doctor TAYLOR. I think that the Bureau of Agricultural Economics could lend a great deal of help, Mr. Chairman—that is, the Division of Crop Estimates, a part of the old Bureau of Crop Estimates, that gathers information with regard to the damage done by the weather and by insect pests, etc. And then the division that deals with the marketing of fruits and vegetables cooperates with the Division of Crop Estimates in gathering information with regard to damage to fruit and truck crops, etc., so that both of those organizations, which work very closely together now in the new bureau, could be helpful from year to year right along, first in giving estimates roughly as to how often damages occur and about how extensive they are, both with

regard to value and area; that is, how complete the damage is in a given area and how extensive the area, which seems to me needs to be taken into account before laying plans with regard to crop insurance of any kind.

Of course, we have been gathering information along that line, and if you should like to have a statement prepared covering a series of years as to what has occurred in the way of damages and what proportion of the crop has been destroyed, we would be glad to prepare such a statement for your record.

The CHAIRMAN. How long would that statement be?

Doctor TAYLOR. Well, we could make it long or short. I had Mr. Jones from the Division of Crop Estimates come along. We could make a relatively compact report, couldn't we, Mr. Jones, on that?

Mr. JONES. Do you wish a report by States?

Doctor TAYLOR. It would have to be by regions, at any rate, if not by States.

The CHAIRMAN. Not by States, I should think.

Doctor TAYLOR. Rather, take the corn belt, the cotton belt, the eastern fruit region, the northern fruit region, etc.

The CHAIRMAN. I think it would be of interest, don't you, Senator Keyes?

Senator KEYES. Yes, I do. I think it would be very helpful.

The CHAIRMAN. Then if you will have it done, Doctor Taylor, we would appreciate it very much.

Doctor TAYLOR. I will be very glad to have such a statement prepared.

The CHAIRMAN. How long has your department been collecting this kind of data?

Mr. JONES. Since 1910.

Doctor TAYLOR. That gives 12 or 13 years of records.

The CHAIRMAN. In what detail have you collected it and what methods have you employed in its collection, Doctor Taylor?

Doctor TAYLOR. I would like to have Mr. Jones answer that, with your permission, Mr. Chairman.

The CHAIRMAN. Very well.

STATEMENT OF MR. S. A. JONES, STATISTICIAN, DIVISION OF CROP AND LIVE STOCK ESTIMATES, BUREAU OF AGRICULTURAL ECONOMICS, UNITED STATES DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

The CHAIRMAN. Mr. Jones, give to the reporter your name, your address, and your occupation.

Mr. JONES. S. A. Jones. Statistician, Division of Crop and Live Stock Estimates of the Bureau of Agricultural Economics.

The material collected by our division has been through questionnaires to our crop reporters, being sent out annually in February to our township list of about 30,000. We usually receive in the neighborhood of 10,000 or more returns. Those questionnaires ask for each of the principal crops, the damage from each principal cause, subdivided under weather conditions, plant diseases, insect pests, animal pests, defective seed, and other causes. The material has been tabulated, summarized by States, and then by the United States, for the period since the inception of the inquiry, so that a statement could be prepared to show the State details within a reasonable time. It would simply require some one familiar with the work to analyze it.

The CHAIRMAN. You say there are 30,000 such questionnaires sent out annually to the farmers throughout the country, in the month of February?

Mr. JONES. Yes.

The CHAIRMAN. Is that number in proportion to the farming population in the States?

Mr. JONES. Largely proportional to the agricultural importance of the different sections. In a general way we maintain in each county voluntary reporters numbering from a dozen up to several dozen. The number being roughly proportional to the agricultural importance of the county. So that our returns are more complete for the more densely populated and highly productive section than for other sections, naturally.

The CHAIRMAN. Well, then, you get a return of practically one-third of the number of questionnaires that you sent over the country, or about 10,000?

Mr. JONES. Yes, sir.

The CHAIRMAN. Upon the 10,000 you attempt to make an estimate of the whole country?

Mr. JONES. For the United States. We have not published figures by States.

The CHAIRMAN. The individual farmers of the country run into about how many millions?

Doctor TAYLOR. Six and a half million.

The CHAIRMAN. Well, do you think the returns you get from these 10,000 furnish data sufficiently accurate to reflect agricultural conditions generally throughout the country?

Mr. JONES. We think so. Ten thousand for the entire United States we think reflects approximately the situation. Of course, it is to be understood that the farmer in reporting may be mistaken concerning the cause of loss. He is giving his best judgment. The cause of loss may be different than he imagines it to be in some cases. But in general, in a broad sense, the returns we believe are accurate, approximately accurate, from year to year.

The CHAIRMAN. Well, in answering this questionnaire he does not go beyond giving his own particular loss and assigning the cause for it?

Mr. JONES. Yes.

The CHAIRMAN. He does not give the community loss?

Mr. JONES. Yes; he attempts to give the community loss.

Senator KEYES. As I understand it, this is one of your so-called reporters that you get a return from?

Mr. JONES. Yes.

Senator KEYES. He reports not for himself individually, but for some specified territory or section?

Mr. JONES. Yes, sir.

Doctor TAYLOR. I wish to say, Senator McNary, that we have been supplementing this type of a report in most lines of our crop-estimating work in the last year or two by getting a large number of individuals to report specific facts regarding their own farms. So that besides these general statements gotten from crop estimators there is a whole series of farmers who, in turn, are each asked a question.

The CHAIRMAN. Well, doctor, there is where I was misled. I thought that questionnaire went to individual farmers.

Doctor TAYLOR. Well, they are, but they are the big crop reporters that report for the whole.

The CHAIRMAN. Are they connected with your department, the Department of Agriculture?

Doctor TAYLOR. They are regular reporters, yes.

Mr. JONES. Voluntary reporters.

The CHAIRMAN. Well, then, you go out and select these men, do you?

Doctor TAYLOR. Yes.

The CHAIRMAN. And they are not compensated at all?

Doctor TAYLOR. No; they get a Yearbook, and we send them certain literature from the department continuously.

The CHAIRMAN. Then you try to get so many to a community?

Doctor TAYLOR. Yes.

The CHAIRMAN. I want to get how thorough this is, because it is one thing to look into. If you collect 10 to a county, and no more, as I understand, what is the number that the individual would have?

Mr. JONES. The individual, Senator, reports for the area with which he is personally familiar. We make no attempt to fix a definite bound for him but his immediate neighborhood, with the conditions of which he is presumed to be familiar.

The CHAIRMAN. Do these reporters for the Department of Agriculture, of the various counties throughout the United States, in your opinion, see the great majority of farmers and get data from them?

Doctor TAYLOR. They have seen a good sample of the people and report on the basis of what they have seen, and we have carried on experiments to see how big that sample needs to be in order to be representative.

The CHAIRMAN. Does the county agent also report to you?

Mr. JONES. Some county agents will report, but they do not as a body.

The CHAIRMAN. Well, those who have reported, do they run uniformly in harmony with these reporters?

Mr. JONES. We have not attempted to segregate them from the general reports.

The CHAIRMAN. Is it your belief that the department could extend its work, amplify it, increase it sufficiently to make its data more accurate?

Doctor TAYLOR. I have no question but what in this line, as in other lines, the work could be improved. For instance, we could specialize, concentrate upon the areas of particular damage, and we are continually building up new lists of farmers from whom we get specific information, so that in addition to having each of these men report for an area, we have a very large number of farmers each one of whom

would tell specifically what happened to him—how much his crop was damaged, and by what. Then we put parallel these estimates made by these crop reporters and these specific statements, and see how they check with each other.

Mr. JONES, you are familiar with the way in which the Division of Fruits and Vegetables cooperates with the Division of Crop and Live Stock Estimates on the fruit.

Mr. JONES. Yes, sir.

Doctor TAYLOR. You might speak of that.

Mr. JONES. Our Division of Crop and Live Stock Estimates publishes certain estimates seasonally on the production of truck crops and fruit, and the Marketing Division of the bureau, having men in the field in close touch with these different centers of production, furnish that division with information. Whenever a report is made by our division concerning the production, the supply of these particular crops, we hold always a conference with the officials of the other division in order that they may supplement whatever knowledge we have with whatever knowledge they have.

Doctor TAYLOR. That happened, for instance, after the big freeze in the south this spring.

Mr. JONES. Yes; we have reports from all of our State statisticians concerning the effects of the freeze, gathered by them by telephone and by telegraph and by some brief questionnaires sent around, and the Marketing Division also had telegraphic reports from all of their men located in the field, and we combined all of that information into a general statement for each State, getting the results of the freeze and the damage.

The CHAIRMAN. I readily appreciate, and have for years, the great value of this fact-gathering machine which you have created, but I think we must all agree that it does not comb fine enough to furnish data upon which you could base hazards in a crop-insurance policy. Have you ever worked toward that end?

Doctor TAYLOR. No; that has not been the purpose. All we had in mind was that it would give a general picture of the situation in this case, and give some basis for passing judgment as to how big a thing this is. It seems to me the basis of your insurance is going to have a lot to do with this matter. Suppose we should, from our crop estimates, find that while there was a great deal of damage over the country in general, that there was only in relatively small spots here and there a damage that cut out the crop, destroyed the crop, or reduced the crop below what might be called a fair crop. You see much of this damage that we talk about takes off the top of what people had hoped might be produced, and yet leaves quite an ordinarily good crop. Now I believe that our figures will be helpful in working out that point.

If insurance companies start out, for instance, to pay for the damages wherever a man feels that he got only an 85 per cent crop or a 70 per cent crop, something like that, they are going to have an awfully big job. If, on the other hand, they start out with the idea that if a farmer doesn't get his money back owing to causes over which he had no control, after he had done his work properly, that will be a much smaller field and a much more important field, as we see it.

Now, I think that the rough general figures that we have may be useful, and the better figures that we may be able to get, since this particular reason for getting the figures has come up, may be basically useful in finding out just how big a job this is, and how much of a job we want to undertake. It is obviously very much more important for a man to get insurance in case his crops are wiped clear out than if it is only 50 per cent. As I see it, insurance is not a productive undertaking. It is a question of equalizing losses. So it is along that I have had in mind that this work might be useful.

The CHAIRMAN. Doctor Taylor, are the county agents under your supervision?

Doctor TAYLOR. No; the county agents are under the supervision of the States Relations Service, which after July 1 will be the Division of Extension of the Department of Agriculture. You have provided for that change, you know, under the Director of Extension.

The CHAIRMAN. Well, I have been in charge of the bill in the last three years, but every year they change the departments around so and consolidate them so I can not keep track of them.

Doctor TAYLOR. Well, a good many people in the country have felt that the county agents were in the past directly under the Bureau of Markets, but of course they have no administrative relation whatever.

The CHAIRMAN. I will give you just a brief outline of some of the reactions that have occurred here during the hearings, namely, it was thought the county agent, the county assessor, the State agricultural schools, perhaps other farm agencies, might all coordinate their activities and cooperate in getting together reliable statistics each year concerning losses and the causes therefor. If that were practicable could your department, working through your reporting agencies, also become a unit in that effort?

Doctor TAYLOR. We would be glad to cooperate.
The CHAIRMAN. Do you think that is a practical scheme, that is what is in my mind?

Doctor TAYLOR. Well, when it comes to the question of appraisals for specific damages it seems to me that specific appraisals will have to be made.

The CHAIRMAN. Yes; but that is in case of an insurance.

Doctor TAYLOR. Yes.

The CHAIRMAN. This is to get together, collate in a large body and mass the figures over a long period of time, the hazards, the annual losses, and the damages and the yields and the causes of the damages, so that you can base the rate and the hazard and determine upon the rate to charge for the risk by some company. That is the data that is necessary before the scheme can go forward.

Doctor TAYLOR. Yes.

The CHAIRMAN. And I think perhaps all that Congress can do is to start some one to work along that line, making these figures, which you have perhaps more accurately, perhaps more in detail.

Doctor TAYLOR. Well, I think that that is a splendid line of work that needs to be carried forward, so that whether undertaken by States or by mutual insurance companies or old line insurance companies the insurance may be very much more scientifically based than it is at the present time.

Senator KEYES. Apparently it has got to be or else there will be no insurance, because the farmers will not take it.

Doctor TAYLOR. Yes; either it will be so high that the farmers can not afford to take it, or so uncertain that the companies can not afford to write it.

The CHAIRMAN. That is it.

Doctor TAYLOR. Yes; our bureau will be glad to increase its work along this line and coordinate with the people in the various States in gathering this type of information.

Mr. JONES. I might say, Senator McNary, that we sent ten or fifteen thousand copies of this blank to one State this year with an understanding that the State college would cooperate with the Farm Bureau in sending this questionnaire to that many people in the State, with a view to working up figures by counties. That was done as an experiment. We hope to have the results from that within a month or two, probably.

And concerning the accuracy of this report. While I stated that the farmer might be mistaken, that it would not be absolutely accurate, yet in a general way we must admit that his report is reasonably accurate, because the major causes of loss are known to the farmer in his locality, and while he may be mistaken concerning some little-known plant disease or some insect with which he is not familiar at the moment because it is new, yet in a general way major causes of loss are well known to him, and will be reported with approximate accuracy.

Now, taking these reports for the 12 years that they have been running, and averaging the yearly results would give you quite a safe figure for a region as large as a State, and even for a section of a State; a tenth of a State, say. If the returns were fuller than they are I believe that county figures could be made that would be reasonably safe.

Senator KENYON. I think it would be well to put this questionnaire in the record.

The CHAIRMAN. Yes; that will be done.

Mr. JONES. While we do not think that questionnaire is perfect we will be glad to have it go into the record, and then if the insurance companies have criticisms and suggestions to make concerning it we would like to have them made.

The CHAIRMAN. The questionnaire, together with the letter from the Bureau of Agricultural Economics accompanying it, will be printed in the record.

(The letter accompanying the questionnaire is here printed in the record in full, as follows:)

[C. E. 2-773.]

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF AGRICULTURAL ECONOMICS,
DIVISION OF CROP AND LIVE STOCK ESTIMATES,
Washington, D. C., January, 1923.

To the REPORTER:

It is the purpose of the inquiry made on the other side of this sheet to ascertain, for each State, the principal causes of the damage to crops, and the approximate relative importance of each cause. It is fully realized that this information can not be given with precision, and also that it is sometimes difficult or impossible to give the exact cause of damage. But it is hoped that each reporter will endeavor to distribute the estimated total loss the past year (that is, the difference between 100, a normal yield, and the percentage of a normal yield produced), in a rough way at least, among the principal causes of loss, expressed in the form of percentage.

INSTRUCTIONS TO REPORTERS.

1. Report only on such crops named herein as are grown in area for which report is made. The answers to all of the questions on this schedule should relate only to the area with which the reporter is familiar. Please read carefully the following instructions before making report.

2. *Causes of loss.*—Where two or more causes act jointly or follow one another, it is often difficult to determine which is primarily responsible for the loss or the proportion to be assigned to each. The many possible combinations of this kind make it impossible to give definite instructions for a uniform handling of such cases. If the percentages of loss are apportioned among the different causes according to the reporter's best judgment, the averages of the reports received will fix the responsibility for the loss with sufficient accuracy to meet the purposes of this inquiry.

3. *A normal yield* is such a yield as would result from a crop starting out under favorable conditions and not subjected afterwards to damaging influences, as unfavorable weather, insect pests, or other injurious agencies.

4. *Damage to quality* should not be considered in making this report unless the yield of the usable crop is thereby lowered. For instance, corn may be damaged in quality by frost without a material loss in the yield of usable corn, but as a rule in such cases some loss to yield occurs also, chaffiness in some degree at least usually resulting, and this loss should be considered. In doubtful cases, where it is difficult to decide how much loss has occurred, the loss in feeding value may be considered as a basis for determining the extent of loss in yield.

5. *Use this schedule only for your report.*—Make all other communications on a separate sheet of paper, which may be inclosed in the envelope with the schedule; but each sheet of paper should have your name, county, State, and post-office address written plainly thereon.

MEANS OF COMBATING DAMAGING INFLUENCES.

The department welcomes, and this bureau will be pleased to transit to the proper office for attention and response, inquiries concerning the different causes of damages to crops, such as plant diseases, insect and animal pests, etc., and the best means of overcoming them or limiting the amount of damage done.

Respectfully,

NAT C. MURRAY, Chief Statistician.

(The questionnaire presented by Mr. Jones is here printed in the record in full, as follows:)

[C. E. 2-773.]

JANUARY, 1923.

Inquiry concerning crop damages causing loss in yield, by specified causes, for year 1922.

[To be mailed promptly in the inclosed penalty envelope which requires no postage. See explanatory remarks on other side.]

	Corn.	Wheat.	Oats.	Barley.	Flaxseed.	White potatoes (Irish).	Hay.	Rice.	Cotton.	Tobacco.	Apples.	Berry/fruits.
(1) Normal yield for locality.	P. d. 100	P. d. 100	P. d. 100	P. d. 100	P. d. 100	P. d. 100	P. d. 100	P. d. 100	P. d. 100	P. d. 100	P. d. 100	P. d. 100
(2) Yield for 1922 (per cent of normal).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(3) Total loss for 1922 (per cent of normal).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
NOTE.—the sum of (2) and (3) for each crop should equal 100.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Instruction for above.—100 per cent is supplied to represent a normal crop, one starting out under favorable conditions and not subjected afterwards to damaging influences, such as unfavorable weather, insect pests, or other injurious agencies. For example, if the crop was normal, enter "100" under question No. 2 and a cipher (0) under question No. 3. If a crop was but 80 per cent of normal, place "80" under question No. 2, and the difference between 80 and 100, or 20, representing the loss,

under question No. 3. In this case "20" would be the percentage of loss to be distributed through the following questions:

Losses.

Distribute below the amount of loss as reported by you under question No. 3.

	Corn.	Wheat.	Oats.	Barley.	Flaxseed.	White potatoes (Irish).	Hay.	Rice.	Cotton.	Tobacco.	Apples.	Berry fruits.
Adverse weather conditions:												
Deficient moisture (drought).....	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.
Excessive moisture.....												
Floods.....												
Ice (or freeze).....												
Hail.....												
Hot winds.....												
Storms.....												
Winterkill.....												
Plant diseases:												
Blight.....												
Rot.....												
Rust.....												
Scab.....												
Smut.....												
Wilt.....												
Other or unknown plant diseases.....												
Insect pests:												
Army worm.....												
Bollworms (cotton).....												
Boll weevils (cotton).....												
Chinch bugs.....												
Cutworms.....												
Earworms (corn).....												
Green bugs.....												
Grasshoppers.....												
Hessian flies.....												
Hornworms (tobacco).....												
Potato bugs (Colorado beetle).....												
White grubs (corn).....												
Wireworms.....												
Other or unknown insect pests.....												
Animal pests.....												
Defective seed.....												
Other and unknown causes.....												
Total of losses.....												
This figure should be the sum of the answers to the above detailed losses and should be the same as answer to item No. 3.												

Please write plainly your name and address below.

Name..... County in which I live.....
Post office..... R. D. No..... Township..... State.....

Senator KEYES. All the insurance men who have testified here from their experience in insurance feel that we should have county figures at least, because they say the State means really nothing when it comes down to insurance. Because you take, for instance, the State of Kansas; the eastern part is a good risk and the western part is not. There is such a variation in the different counties of the State.

Doctor TAYLOR. Have you taken up with the Weather Bureau, Senator, the possibility of studying the recurrence of hailstorms in given regions?

The CHAIRMAN. No; we have not.

Doctor TAYLOR. I have the impression that there is a possibility of getting from the Weather Bureau records facts that will show the occurrence of the weather factors that would tend to damage, like hail. I think that besides this particular work of the crop-estimating people that the Weather Bureau may make some contributions also along this line. And then there are other contributions that have not been made, I believe. Mr. Valgren, with whom you are well acquainted, has been studying this whole question of insurance for years, but I do not believe he presented anything, did he, with regard to State insurance? Have you had any presentation here with regard to State insurance?

The CHAIRMAN. No, Doctor. I found a list of capable men, a list compiled by Mr. Valgren, largely outside of the correspondence that I had had, and in practically every instance, if not wholly so, these men were not able to get away at this particular season of the year. It is the planting season, and inasmuch as we knew this was just the initial work of the committee we thought that we would call the Weather Bureau department you have mentioned, and these insurance men, who have had practical experience following State aid in these various Northwestern States, to be with us some time in December.

Doctor TAYLOR. Yes. If you would like, I think Mr. Valgren might make a little study of what has happened in the way of State insurance in the meantime. He is working in that field anyway.

The CHAIRMAN. The committee would be very thankful if Mr. Valgren would do it. He gave some very excellent testimony here.

Doctor TAYLOR. So that when you get ready to bring in these people in the fall he will be glad to be present, and then by having studied the matter, if he can supplement what the men from the States say, it might round out the report somewhat.

The CHAIRMAN. Well, we will appreciate it very much indeed if he will do that. Senator Keyes and I in discussing the matter at various times thought that after we concluded the hearing to-day with your testimony we would take a recess, and that this record will be published in ample time for study, and then we can supplement it along in the winter before we make our report the 1st of April, at the next session of Congress, and that will give Mr. Valgren ample opportunity to help us very materially.

I think you understand the purpose the committee has in mind. We hope it is not a wild one or an infeasible one.

Doctor TAYLOR. I understand that your objective is to get together enough facts so that whatever is done may be done intelligently.

The CHAIRMAN. That is it exactly. And we think when we reach that basis of intelligence you will find enough progressive farmers, whether as groups or whether those who want to patronize established companies, to take advantage of an implement which the Government system will supply them, which will very much stabilize the industry of agriculture?

Doctor TAYLOR. Yes.

The CHAIRMAN. I do not feel that there is anyone who has given the matter thought who desires to make insurance so profitable that men will neglect their crops or insure a certain annual income irrespective of crops. But I can see a great advantage in the farmer taking out insurance, and if he should lose a crop or suffer damage he will not be without some credit and available cash to go ahead, and when that is done I think that much has been done for him.

Doctor TAYLOR. Of course it wants to apply to the things over which the farmer has no control.

The CHAIRMAN. Yes; indeed.

Doctor TAYLOR. And to be paid only in case he has done his part.

The CHAIRMAN. Yes. In a new field like this it is very difficult to get the data that you would like to. Sometimes you think so little has been accomplished by the mere inquiry, but I think it has to be done some time, and it looked to the committee that they could well afford to consume the time and do the essential work to promote what I think is a good thing for the farming community of this country.

Doctor TAYLOR. From what I have seen of the testimony that has been brought forward here I feel that the work has been well worth while.

The CHAIRMAN. I think we will want you again in the fall, Doctor. I think we will all enter it with more confidence after we familiarize ourselves with the record and have time for study.

Doctor TAYLOR. I will be glad to go over the record when it is published.

I have in mind, since you have brought this matter up, having our special statistical committee take this matter up and work on the question of how we can improve

our damage statistics, as this gives a very definite purpose for improving them, although we have wanted them as accurate as possible in the past, because they have been a part of the basis of getting the general crop estimate.

Mr. JONES. I presume that the committee has copies of what has been published in our crop reports?

The CHAIRMAN. Oh, yes; we have those.

Senator KEYS. The insurance companies, I am pleased to say, seem to be sympathetic with this idea, and have expressed themselves as desirous of going ahead with it and being as helpful as possible. And it was also interesting this morning, especially to me, to hear the Farm Bureau Federation and the National Grange and others who hold conventions during the summer, or before winter, say that they propose to take this matter up as one of the important things for discussion and consideration by the farmers themselves at these meetings. I hope we can get their viewpoints and suggestions by fall. So I should think when fall comes we ought to have a great deal of data to work upon.

The CHAIRMAN. We are very grateful to you, Doctor Taylor, and Mr. Jones, for your contribution.

Doctor TAYLOR. We will do everything we can to aid in giving all the information available on this important subject, Senator.

The CHAIRMAN. Thank you.

I want to place in the record an article that was sent to me by the editor of the Weekly Underwriter, a paper published at 80 Maiden Lane, New York. It is in reference to the article on agricultural insurance, written by Mr. Valgren in May, 1922. It contains very useful information.

(The article referred to is here printed in full, as follows:)

"You very kindly asked me to discuss at the November meeting in 1922 the paper on agricultural insurance read by Mr. V. N. Valgren at the May meeting, 1922. This I promised to do, but was prevented by circumstances from being present.

"In connection with the matter I had developed some material, the principal part of which is an exceedingly interesting letter from a western correspondent who represents a company that has tried out, so to speak, agricultural insurance. I therefore am proposing as my contribution to the discussion to quote the salient points in this letter, which are as follows:

"It was found that the demand for this class of insurance came very largely from the semiarid sections, or from sections subject to the frost and freeze hazards, or from sections infested with insect pests, or where land was subject to overflow.

"In the semiarid sections, where crops are matured on an average of but two years in every five, an adequate rate could not be collected. In sections subject to the frost and freeze hazards, or sections infested with insect pests, also in sections where the land was subject to overflow the companies likewise were not able to collect an adequate rate.

"It was found that farmers desired to carry insurance for an amount representing the cost of production and garnering, plus interest on a sum representing the cash value of the land.

"It has been said (and truthfully so) that the average farmer, if he were compelled to hire at current prices the labor for planting, cultivating, and garnering his crops, and were to add thereto the cost of seed and interest on an amount representing the cash value of his land, would find that his crops would not (in ordinary times) bring a return equal to the cost of their production.

"One of the troublesome elements which developed in the attempt to write crop insurance was the fluctuation in the value of farm products.

"For example: In one season at planting time, also after the new wheat had sprouted and stood and had become an insurable risk, threshed wheat was selling for approximately \$2 per bushel. Naturally, the cost for producing the next year's crop was based on the returns which the farmer was then receiving for his wheat. The crop which was planted during the fall when the wheat was sold at the high price was harvested and threshed the next fall and sold at less than \$1 per bushel.

"The form of coverage used had been written on the basis of cost to produce at the high selling price and, therefore, notwithstanding the fact that the crop yield in bushels was better than a normal one, the companies faced a claim for loss under practically each and every policy issued. The returns to the farmer, on account of the low selling price, were considerably less than the cost of production at the high prices for labor and seed which prevailed the previous fall.

"The companies from their experience found that they could not afford to insure crops upon the basis of cost as above set out, nor under the form of policy then in use, as they were in effect not granting indemnity, but rather were guaranteeing the price of wheat.

"The companies were forced the following season to reduce to an arbitrary basis the amounts of insurance which they would write on a given acreage.

"One company issued policies containing what might be termed an "upset" price for grain. The "upset" price fixed the limit of liability per bushel on grain for which the company would be liable. For example: The "upset" price might have been fixed at \$1.10 per bushel. At the time settlement was claimed under the policies the price of wheat on the market might have been \$1.50; nevertheless, the "upset" price named in the policies was the one used in determining the company's liability.

"When the companies undertook to reduce the amount of protection which they would grant per acre to a low and arbitrary amount, or attempted to sell policies containing an "upset" price per bushel on grain, it was found that there was no demand for crop insurance except in those sections where an adequate rate could not be collected no matter what amount of protection was granted, nor what form of policy was used.

"We believe that in time some plan will be evolved under which stock fire insurance companies may meet the situation. We also believe that it will be necessary to educate the farmer to the idea that crop insurance must be for protection only and speculative features must be entirely eliminated. In other words, the farmer must be satisfied with an arbitrary amount of insurance per acre, which amount must be small. Later on, and as the companies gain in knowledge and also in experience, such changes can be made as are warranted by their experience and by the rate of premium charged.

"In the semiarid sections, overflow sections, and pest-ridden sections we are of the opinion that crop insurance can not be successfully written. The rate which it would be necessary to charge in such sections would be prohibitive."

The CHAIRMAN. Here is another article that I desire to insert in the record. It is from Mr. Arthur Dixon, of Rolla, N. Dak. Mr. Dixon has had wide experience in crop insurance in North Dakota, and sends me an article entitled "Conclusions on methods of crop insurance as applied to wheat in North Dakota." That will be placed in the record, together with the letter addressed to the committee.

(The letter and article referred to are here printed in full, as follows:)

ROLLA, N. DAK., March 31, 1923.

TO THE COMMITTEE ON CROP INSURANCE,

Washington, D. C.

GENTLEMEN: I saw in a local paper that a Senate committee will meet in April to take up the question of crop insurance, and I have been deeply interested in this question for some years, particularly relating to the small wheat farmer, as I live in a locality adapted for that industry.

I recognize that somewhat the same problems perplex farmers in all parts of the country, and I hope that as a result of your deliberations you can evolve some plan to simplify farming by removing some of the risks incurred each season by the man who risks his labor and costs planting a crop of any necessity for your benefit, in the hope of making a successful enterprise.

I send herewith a summary of conclusions I have come to by observations among our farmers here, and I believe, that wherever I have used the term "wheat" because it is the crop I am familiar with, that you can substitute any other of the standard crops, cotton, corn, tobacco, and the conclusions would affect them in about the same way.

May I hope you will give this paper the attention of your committee. I feel deeply on this subject, I know personally so many of the men I speak of, who have worked hard and faithfully many years, and so many times when success has seemed in their grasp a sudden hail storm, rust disease, or some other calamity has set them back years in their efforts, and if some insurance plan were in effect, they would at least be repaid the time and money laid out on the crop, and have a little something to carry them over the hard winter.

My objection to a hail insurance policy only is that if taken out it only protects against that one calamity, and I have seen it happen many times, that a farmer takes out hail insurance on a good-looking crop, and rust has struck it, and the premium for the hail insurance forms another liability he has to meet.

I know of several instances when the whole crop, when harvested, did not pay for threshing and the amount of the hail insurance.

A general crop insurance, with a moderate premium, covering the actual costs of the crop, seed, labor, and expense, and insuring against all loss, will be a blessing to the small farmer, and I hope you can get some good, simple, effective working plan.

With best wishes for your success, I remain,

Sincerely yours,

ARTHUR DIXON.

CONCLUSIONS ON METHOD OF CROP INSURANCE AS APPLIED TO WHEAT IN NORTH DAKOTA.

GENTLEMEN: My suggestions for relief of agriculture and crop insurance relate more particularly to wheat growing, as I am more familiar with that crop as grown in North Dakota, and because it seems that wheat as a food product needs special attention to have it marketed at a reasonable price for the benefit of our own people, who are consumers of the product.

This plan is to reduce the cost by removing most of the risk, and is based upon the following premises:

First. That it is true and we are sincere in our desires to give some measure of relief that will insure to the farmer at least a return over the cost of production.

Second. That it is true that farming as at present carried out and products marketed do not give a return over the cost of production.

Third. That the wheat raiser at this time is entitled to special consideration on account of the position taken in war time, when a price was fixed preventing a raise in price such as other agricultural products received.

Fourth. That the price received by the wheat grower for his entire product is always fixed by the price of the exportable surplus, no matter how small a proportion that may be of the entire amount, until or unless the home consumption is in excess of the home supply (which would be a calamity, meaning potential famine, to be avoided); so that it is evident that the wheat raiser can receive no benefit from a tariff, no matter how high, and he is injuriously affected by the rate of exchange on foreign currency, which makes our wheat at ordinary prices seem out of reach of the ordinary European buyer.

Fifth. That the growing of wheat, in sufficient quantities for a food supply is a necessity, and should be encouraged and assisted in those localities more adapted to wheat raising than to other forms of farming.

Sixth. That it is not advisable by subsidizing or putting a fictitious price on wheat to stimulate the growing of wheat in localities where more profitable crops are now being raised, recognizing also that artificially raising the price of wheat over a normal market price will work a hardship on our own people who purchase wheat to eat.

Seventh. That it is to the interest of the country as a whole that the smaller farmer should be assisted, and any Federal aid proposed should aim more directly at helping a small farmer than larger landowners, who might be called speculators in farming.

Eighth. For immediate relief it must be recognized also that the smaller farmer in need of immediate relief has already borrowed all the money that his credit will stand or that his earning capacity will permit him to pay interest on, so it would seem that any further extension of credits will not help the real parties in their immediate need.

Granting these premises, it would seem that the immediate need of the small farmer demands at this time some method by which he can plan and go ahead with a crop each season, with the assurance that he will be repaid for his costs of operation, if not by a successful crop, then at least by the repayment of the deficiency by insurance.

With this assurance of Federal assistance or insurance, he can go ahead and buy seed cheaply in the best market, he can get feed for his stock, and his credit will be immediately restored, so far as the coming year's operations are concerned, because it will be recognized that he can pay for all stuff purchased for a coming crop from the insurance and his old indebtedness can wait over till he makes some profit from his farming ventures.

Isn't this exactly what is needed at this time? More immediate credit. Any ordinary finance scheme of extending more credit will not help the man who has no security. It would simply make that much more indebtedness for him to pay interest on. Higher prices for wheat will not help the man who has no wheat to sell. But a proper system of crop insurance will immediately restore credit to any man who is able and willing to labor to put in a crop, no matter how much or how great his past and present indebtedness.

How can this be worked out? Well, it's a pretty big problem; but I would think that if the Federal Government has been able to supply seed on short notice over wide areas that it will not be impossible to work out a crop-insurance plan that can be successful.

My own suggestion (working almost entirely in the interest of the smaller farmer) would be that a man who owns or has rented or controls land on which he figures to raise a crop of wheat should be authorized to list up to, say, 300 acres as land coming under the Federal crop-insurance plan, list with the county agent or county auditor, describing the land and its history with regard to past crops and condition as to tillage.

He should give an estimate as to actual cost of preparing land and sowing. In case of seed or supplies purchased, certified bills from parties supplying same should

accompany estimate, and then around harvest time, if the crop did not seem to justify expense of harvesting, report should be made and disposition ordered by county agent. If grain is needed, poor crops would be harvested, and if grain is plentiful poor crops would be ordered turned under and ground prepared for another season.

The proceeds of the crop, backed up by reports from thresherman and neighbors and county agents' own observation, should be figured as against cost of operation and any deficiency made up from insurance fund.

Bills for seed, feed, twine, threshing, etc., to be paid so as to insure good credit feature; farmer gets paid for his time, labor, use of stock, etc.

How is it financed? Aye, there's the rub; probably a Federal appropriation would be needed to start such machinery going. Do we ever figure on anything of this kind without a Federal appropriation? But I do not believe such a crop-insurance plan would be anywhere near as expensive as a fixed price for wheat would prove to be.

The farmer in making his application would agree to pay a premium for this insurance, the amount of which would go into his cost of operation and is met either by profit from his crop or canceled if crop does not meet expenses.

A Federal appropriation would be needed to meet possible errors in figuring amount of premium to meet unexpected heavy losses in a bad year, and also to let the premium be low for the first few years, so that small farmers would be encouraged to take out this protection.

It looks as feasible and to my notion is more fitted to meet present conditions than any plan I have seen proposed.

This plan if applied to crops also encourages more careful and scientific farming, as the help of the county agent is called to plan crops and methods, and the eradication of diseases, such as boll weevil in cotton, smut and rust in wheat, could be largely controlled because insurance could be refused to those who neglected to protect their crops against preventable diseases.

Respectfully submitted.

ARTHUR DIXON, *Rolla, N. Dak.*

The CHAIRMAN. I also desire to place in the record a letter from Mr. Martin S. Hagen, manager of the State of North Dakota Department of Hail Insurance. This letter is dated May 22, 1922.

(The letter referred to is here printed in full, as follows:)

STATE OF NORTH DAKOTA,
DEPARTMENT OF HAIL INSURANCE,
Bismarck, May 22, 1922.

HON. CHARLES L. McNARY,
United States Senator, Washington, D. C.

DEAR SIR: North Dakota enacted in 1911 the first State hail insurance law that was placed on the statute books of any State in the Union. This law was in operation till the year 1919, when the legislature revised the law. The 1921 legislature again reenacted the hail law and we now believe that North Dakota has the most perfect hail insurance law on the statute books of any State or Province. We are recommending only a few minor amendments to the legislative assembly of 1923, and if such meet with its approval we believe we have as nearly perfect a law as we under present-time condition can get.

The 1919 and 1921 hail laws have worked out very satisfactorily. For each of the years 1919, 1920, and 1921 more than 70 per cent of all the crops grown in the State have carried State hail insurance. This in itself is a proof that most farmers are in favor of the law, and particularly so as the only compulsory feature of the law is to list the land for hail purposes and pay the 3 cents per acre flat tax on all tillable lands for five years up to and including 1925—the hail indemnity tax may be canceled any time prior to June 15 of each year; thus nobody needs to keep the insurance who does not wish it, except that a few nonresident landowners who would ordinarily not keep the insurance may indirectly be protected against their wish, as tenants' consent must be obtained before withdrawal can be made. This provision is for the protection of the renter, who would otherwise be at the mercy of an unscrupulous landowner.

The fact that State hail insurance for 1919 and 1920 cost only 44 per cent compared to the old line companies' 10 per cent, and in 1921 6.3 per cent to the old line companies' 12 to 14 per cent, depending on locality and kind of crop, is a further proof that there is a reason to hope for a continued success. Over 11,000,000 acres protected at a risk of \$30,000,000; this is nine times more than the combined risk carried by all the thirty-four-odd private companies doing hail business in the State. The total indemnity paid for losses in 1921 was \$4,788,593.98. Indemnity is paid by

warrants drawing 6 per cent interest, but \$1,600,000 of these have already been paid by the State treasurer, and two Minneapolis financial concerns have taken warrants that the farmers wished to dispose of at a reasonable discount (discount now one-half per cent).

The 3-cent flat acreage tax also referred to is used for creating a surplus in the fund to pay losses more promptly. Such tax amounts to about \$830,000 a year, and when the five years are past we shall have a surplus of over \$4,000,000 and will then be able to pay the losses in December of the year in which the loss occurs or perhaps immediately after adjustment. The failure to pay losses promptly in the past has been the only real objection to our insurance plan, and this is now gradually being remedied by the surplus revolving fund—revolving as we use it every year and replenish as taxes come in, and before three years the surplus will be theoretical so far as actual cash in the treasury is concerned. We always have a great many delinquent taxes to contend with, but indemnity warrants are issued, due and payable on the call of the State treasurer; the hail taxes are back of them as security, and payments are made as taxes are collected.

With an undertaking of this kind it is only natural that we have some opposition, but as we are trying to keep the department out of politics we have not had much criticism. With over 21,000 losses to adjust in 1921, we have of course had our share of trouble—for although the farmers are proverbially honest there seems to be a few that judge their loss to be slightly larger than we actually prove it to be—and before settlement some disputes arise.

It is very difficult to give detailed information in a short letter. We are therefore sending you under separate cover a copy of our last report and copy of the hail law, from which we trust you will find further information. If there should be any particular phase of our department or our law which is not fully explained, we shall be glad to have you advise us.

We thank you for your inquiry.

Yours, very truly,

MARTIN S. HAGEN, *Manager.*

The CHAIRMAN. I also desire to place in the record a letter written to me, under date of April 21, 1923, from Mr. S. A. Olsness, commissioner of the department of insurance, State of North Dakota, together with a copy of a letter, which he incloses, to the Journal of Insurance and Financial Statistics, in relation to this subject. (The letter and inclosure are here printed in full, as follows:)

DEPARTMENT OF INSURANCE,
Bismarck, N. Dak., April 21, 1923.

HON. CHAS. L. McNARY,
United States Senate, Washington, D. C.

DEAR SENATOR: I wish to acknowledge with thanks receipt of your invitation as of April 13 to attend your committee meeting called for the purpose of studying the subject of crop insurance to take place in Washington, D. C., on April 24. I am extremely interested in the subject of crop insurance and would have liked very much to be with you, but, as our traveling fund does not permit, will have to forego my wish to attend your hearing. However, if there is anything that we may do to aid your committee in its work we shall cheerfully comply if you have any questions to ask, if you will only suggest what you want. I take the liberty to inclose herewith a copy of a letter on this subject sent to the Journal of Insurance and Financial Statistics some time ago.

Respectfully,

S. A. OLSNESS,
Commissioner of Insurance.

JANUARY 12, 1923.

JOURNAL OF INSURANCE AND FINANCIAL STATISTICS,
Newark, N. J.

DEAR SIR: In answer to your query of the 1st ultimo relative to the subject of crop insurance, wish to state that, due to the recent holidays and the approaching session of legislature, I have been unable to dispose of this matter until now.

While I find it impossible at this time to go into the matter fully, I do wish to state that this form of insurance has been attempted in our State by three various insurance companies, viz, the National Union Fire Insurance Co., of Pittsburgh, Pa., the Bankers' Insurance Co., of Helena, Mont., and the Hartford Insurance Co. The first two ones operated in 1917, while the latter wrote some business in 1920. The Bankers' Insurance Co. met their Waterloo during the first season and sank without trace. The best source of further information in regard to this company would be the insurance

department or the attorney general's department of Montana. I have no doubt but that the other two companies would furnish you with the desired information by writing them.

It is my opinion that unless some such method of crop insurance is evolved by which the farmers of these Western Plains States can obtain protection against crop failures at a reasonable cost to indemnify them to the extent of their investments, grain farming in these sections must eventually be abandoned. The Hartford representatives told me that if 8 or 10 of the strongest line companies in the country could organize a huge insurance company and operate jointly, either by writing insurance direct or by writing it separately and then reinsuring in order to distribute the risk, they thought such insurance might be successful. It is my opinion, however, that the Government should provide this insurance to farmers in semiarid districts. In principle this would be the same as when the Government furnishes irrigation to farmers in arid regions. If the Government provides such insurance, there would be no need of extending millions to farmers for feed and seed as has been the case of recent years, and it should not be in the form of a subsidy. The farmers do not ask that. They would be willing to pay for such crop insurance and they can afford to do so because of the abundant crops raised in these sections during favorable seasons, but such insurance should be furnished at cost.

This department would be greatly obliged if you have any further information on this subject as matters develop in the future, and if there is anything we may do in assisting you in the matter we shall cheerfully do so.

Yours truly,

S. A. OLSNESS,
Commissioner of Insurance.

The CHAIRMAN. I will also ask to have inserted in the record an article by Mr. V. N. Valgren, United States Department of Agriculture, printed in the Journal of Insurance and Financial Statistics for October, 1922, which is continued in the November, 1922, issue of the same magazine.

(The article referred to is here printed in full, as follows:)

CROP INSURANCE.

Billions of dollars are invested each year in farm crops, or more accurately, in prospects of such crops. Because they yearly risk a large part of their accumulated wealth, as well as large amounts of personal labor in mere prospects, farmers have by some been referred to as the greatest class of gamblers in the world. The name of gamblers is properly applied, however, to those taking unnecessary risks and since farming is one of the most essential of men's economic activities, this designation seems both unfair and incorrect. The term risk-takers as applied to farmers would seem more appropriate.

For nearly all other kinds of necessary human enterprise, insurance against the risks or hazards involved is now available and very generally procured. Navigation, or "trading at sea," which, particularly under older methods, represented one of the most hazardous forms of enterprise, was the first to be provided with insurance protection. Nevertheless, the growing of crops, which, like navigation, is peculiarly subject to that capricious thing we call the weather, is still lacking in adequate insurance facilities, each individual farmer in general being expected to take the risk involved in his year's investment in crop prospects. Even the broad term weather, covering as it does such hazards as drought, floods, excessive heat, frost, hail, and storms, with all their possible combinations, does not exhaust the list of hazards to which growing crops are subject. In addition to all these, there are the dangers from various plant diseases, and insect as well as animal pests.

ANNUAL AMOUNT OF LOSS OR DAMAGE TO CROPS.

Before speaking of amount of loss or damage to crops it is necessary to have clearly in mind what we mean by these terms. It is apparent that many speak of losses to farmers from this or that cause when they actually mean a reduction in promised yield. Such reduction does not in all cases, however, mean financial loss on a year's operations. Let us assume, for example, that a farmer spends upon an acre of wheat the equivalent of 15 bushels at prevailing price, this outlay covering seed, labor of all kinds, wear and depreciation on implements used, interest on investment in land, taxes, fertilizer, etc. It may be that this same acre has, under similar methods of tillage, yielded 25 bushels of wheat. Now, if, for example, at some stage of the devel-

oment of the crop there is promise of a maximum yield and this promise is reduced by the occurrence of drought, hail, insect pests, or some other cause, so that the yield is reduced to 16 bushels per acre, it is natural and proper to speak of crop damage having been suffered to the extent of 9 bushels. Since the assumed gross cost or outlay in connection with this acre of wheat is only the equivalent of 15 bushels, there is, however, a slight profit and not a financial loss in connection with the crop. If, on the other hand, the crop damage is such as to reduce the actual yield to 8 bushels, a financial loss is suffered by the farmer equal to the value of 7 bushels of wheat.

Logically it would seem to make no difference whether the reduction in prospective yield is the result of some spectacular catastrophe after the wheat is well on the way toward maturity or if the seed for one reason or another fails fully to germinate and therefore at no stage gives tangible promise of a full or maximum yield. In any case the difference between the yield known by experience to be possible and the yield actually harvested may be ascribed to one or more causes of crop damage.

In order to make it possible to work out approximate figures for the amount of crop damage from various causes, the United States Department of Agriculture has arbitrarily assumed that a crop exceeding by 10 per cent the normal yield is a perfect or no-damage crop for the territory in question. The normal yield may, in turn, be defined as the yield that the crop reporter has in mind as one which in good years actually occurs over extended areas, and in percentages of which he reports crop prospects as well as crop damages from the different causes. The raising of the normal yield of 10 per cent in order to determine the no-damage yield is an attempt to make suitable allowance for the fact that the yield which the crop reporter has in mind as a normal yield for his locality is not strictly a perfect or no-damage yield. The difference between a perfect or no-damage yield and the actual yield is taken as a measure of crop damage.

Using the term "crop damage" as just defined, the department about 12 years ago began to require of its thousands of crop reporters in all parts of the country estimates of the percentage of damage caused to leading crops for specified causes. The crops covered are corn, wheat, oats, barley, flaxseed, rice, potatoes, tobacco, hay, and cotton, while the specified hazards to which crop damage is attributed include deficient moisture, excessive moisture, floods, frost, hail, hot winds, storms, plant diseases, insect and animal pests.

Space does not permit any detailed presentation of the data obtained. Summaries of these data have been published in tabular form in the Monthly Crop Reporter of the Department of Agriculture for August, 1920, and in the Department of Agriculture Bulletin 1043, which deals specifically with crop insurance.

Taking wheat as an example, it was found that on a percentage basis covering the United States as a whole the average annual crop damage from the various causes during the decade 1909 to 1918, inclusive, was as follows: Deficient moisture, 12.38 per cent; excessive moisture, 2.03 per cent; floods, 0.33 per cent; frost, 0.7 per cent; hail, 1.1 per cent; hot winds, 2.02 per cent; storms, 0.26 per cent; animal pests, 0.19 per cent; other and unknown, 0.86 per cent; total crop damage from all causes, 28.77 per cent.

For the other crops the percentage, representing the average annual crop damage from all causes for the country as a whole, are as follows: Corn, 31.99 per cent; oats, 24.52 per cent; barley, 28.65 per cent; flaxseed, 36.44 per cent; rice, 19.04 per cent; potatoes, 30.12 per cent; tobacco, 20.50 per cent; hay, 20.35 per cent; cotton, 35.49 per cent.

Translating the above percentages into quantity figures, it means that the average annual damage from all causes on the crops in question amounted to the following figures: Corn, 1,345,600 bushels; wheat, 301,200,000 bushels; oats, 414,300,000 bushels; barley, 74,100,000 bushels; flaxseed, 10,200,000 bushels; rice, 7,400,000 bushels; potatoes, 164,800,000 bushels; tobacco, 296,300,000 pounds; hay, 20,414,000 tons; cotton, 3,731,000,000 pounds.

It has also been calculated that on the basis of prevailing prices during the different years the annual damage to these 10 crops amounted to a total sum varying from a minimum of \$2,054,000,000 in 1912 to a maximum of nearly \$3,066,000,000 in 1918, the average annual crop damage during the 11 years 1909 to 1919 being \$2,620,000,000.

As would perhaps occur to the reader even without having his attention called to it, the value figures just quoted represent in part only a theoretical diminution in gross income. While an increase of 10 or 20 per cent in the crop yield of a given farm will increase the gross income of the farmer by the same percentage, this relationship between increase in yield and increase in gross income does not hold when all or even a large proportion of the entire farmer group is considered. In the latter case increase in yield will of course materially affect the total supply of the commodity in question, which naturally affects the price. No attempt has been made

to allow for this fact in translating the quantitative crop damage into terms of dollars. Furthermore, if the true diminution in gross income to farmers by reason of crop damage were ascertained, such figures would still be of little assistance in determining the financial loss suffered by farmers on their year's operation.

For the amount of actual financial loss suffered annually by reason of crop damage we have not even a reliable estimate. Such loss evidently can not be arrived at by the use of general averages. In fact, the annual financial loss may be said to be the product rather of the frequency and extent of variation from averages in crop damage and in actual yield. In other words, methods of tillage and cost of production tend to adjust themselves to these averages, some land here and there being abandoned in connection with this adjustment. It is the unexpected and not the expected that results in financial loss, or in extra profits as the case may be. Furthermore, financial loss, as recent experience has amply demonstrated, may be suffered even with perfect yields when agricultural prices are out of proportion to other things.

It may be said by way of emphasis that crop damage is the difference between a perfect or no-damage yield and the actual yield, while financial loss is represented by the difference between the investment in the year's crop and the harvested crop figured at local market price. Stating it another way, financial loss is the result either of crop damage or depression in price, or both, to such extent as to bring the value of the actual yield below the investment in the crop. In general the maladjustment of prices as a source of loss will be ignored in this paper, since crop insurance would seem to be concerned primarily with crop failure and only incidentally with problems of price.

KIND OF INSURANCE NEEDED.

The risk of crop damage not sufficiently severe to produce financial loss can without great inconvenience be carried by the farmer himself. To attempt to insure against such crop damage might well be said to be a form of extravagance. A word of explanation on this point may be permitted.

If insurance consisting of the collection of premiums and the distribution of such premiums to those incurring a loss under the insurance contract could be conducted without expense, it might be wise to insure against every conceivable source of loss, thereby practically equalizing and standardizing the income. It is, of course, no more possible to achieve this than it is for a locomotive to turn into tractive power all the energy contained in the coal that it consumes. A greater or less proportion of the amount contributed by the insured as premiums must be used to meet the expenses of conducting the business, or, to carry out the figure, to overcome the frictional element of the insurance machine. It is, therefore, possible in the long run for an insurance company to pay back in indemnities to its members or patrons only a materially smaller amount than the sum collected from the insured in the form of premiums, and as a result insurance is to be recommended against such crop losses only as would seriously cripple the farmer.

The ideal crop insurance will, to the extent indicated, provide protection against all unavoidable hazards to which the crop is subject. If one of these hazards is left unprovided for in the insurance contract, the insured may lose his crop from that hazard and find himself worse off for having carried insurance by the amount of premium paid or premium obligation assumed.

In the final analysis, there is little more logic in carrying crop insurance against certain specified hazards with the insured carrying the total risk against other hazards than there would be in taking out a life insurance policy against certain specified diseases. The thing that the buyer of life insurance seeks is the positive assurance that in the case of his premature death the economic loss sustained by his dependents will to a greater or less extent be made good by the insurance. Similarly, the thing needed by the producer of crops is the assurance that if these crops fail to produce a reasonable harvest, no matter what the cause of such failure may be, assuming that he himself has fully performed his part, he will be indemnified for the loss that he has sustained.

It is hardly necessary to point out that in no case should the insurance safeguard a man against his own negligence or carelessness. Any insurance which does this tends to create a form of moral hazard that no company can afford to assume. It also tends to diminish the efficiency and productivity of agriculture as a source of national wealth.

While the crop insurance policy to meet requirements fully must cover all unavoidable hazards, it would no doubt be going to extremes to assert that, in the absence of an offer of such a policy on favorable terms, no insurance should be purchased. In certain parts of the country the hail hazard is relatively severe.

The average loss for a State by reason of hail is rarely if ever as large or as widespread as the loss from certain other climatic hazards, but the loss to those who do suffer from it is often very severe. Not infrequently the crops of individual farmers are totally ruined. Because of this peculiarity of the hail hazard, losses therefrom being concentrated on a relatively few and the damage therefrom being in general distinguishable from that brought about by other causes, it is practicable from the point of view of the insurance organization to give protection against this hazard alone and to hold down its expenses to a reasonable percentage of the premiums. The protection offered by hail insurance may be well worth what it costs. In true crop insurance, however, the hail hazard should certainly be included. It should not be necessary for the farmer to secure two insurance contracts in order to be protected against serious or total loss. Economy in insurance operations and convenience to the insured argue for complete coverage in a single policy.

It has already been pointed out that the farmer can not wisely shift to an insurance company the risks which he can carry himself without undue danger to his safety and prosperity. It may also be emphasized that the farmer can not afford to buy insurance protection against any of his risks if the expense item involved in the insurance operation is unduly large. The insurance machine must operate with reasonable efficiency if the seeker of insurance protection is to find it adapted to his needs. Assume, for instance, that 50 per cent or more of the premiums collected were absorbed in expense of operation, thereby making the total cost to all the insured two or more times the amount received by them in indemnities to cover losses incurred. It is obvious that it would be wiser for each one to take a chance on a serious loss and thereby have also a chance of retaining a liberal income in prosperous years. Such an arrangement would insure his ruin rather than his success.

This illustration applies particularly, of course, to forms of insurance covering hazards which are not subject to human control. Certain kinds of insurance, such as that against fire, loss of live stock by disease or accident, and, even more, certain forms of casualty insurance, involve the buying of a service in the nature of loss prevention as well as a guarantee of indemnity in case loss occurs in spite of preventive measures. In such cases, insurance might be profitable even when premiums collected are relatively large in proportion to the indemnities paid by the company. In the case of crop insurance, however, the service of the company consists not in loss prevention but merely in the collection of funds and the distribution of these funds as indemnities to those who suffer loss. Under such circumstances the expense item must be only a minor part of the total cost to the insured if the purchase of protection is to prove a wise investment.

PRESENT INSURANCE FACILITIES.

The only insurance hitherto generally available for the risks or hazards in crop production has been that against hail, and even this form of coverage is of relatively recent origin. Hail insurance on growing crops has grown during the last decade into a business of considerable magnitude. The total premiums for 1919, which marks the highest point yet reached, exceeded \$30,000,000. The total risks covered amounted to approximately \$560,000,000. About one half of these risks was carried by the joint-stock companies, some 60 in number, and the other half was divided almost equally between a group of 40 mutuals and the State departments in North Dakota, South Dakota, Montana, and Nebraska. (See U. S. Dept. Agr. Bull. 912, Hail Insurance on Growing Crops in the United States, p. 11.)

A certain amount of fire insurance has also been written on standing grain in some States of the West. This form of insurance is most common in districts where large acreages of wheat are left standing until thoroughly ripe and dry and then cut and threshed in a single process. The insurance takes effect on the grain in the field and as a rule follows it until it is sold or stored in a commercial elevator or warehouse.

In recent years attempts have been made to work out a more general plan of insurance coverage for farm crops. The first attempts of this kind were made in 1917, when three joint stock fire insurance companies offered crop insurance in North Dakota, South Dakota, and Montana. Two of these companies wrote practically identical contracts and the contract of the third differed but little from the others. A brief outline of the leading features of the plan follows.

The insurance covered all the hazards to which crops are subject, with the exception of fires, floods, winterkill, and failure on the part of the farmer properly to till and care for his crops. The hail hazard was specifically included in the coverage offered by this form of policy. The amount of insurance was fixed at the relatively low figure of \$7 an acre and the insurance applied to a specified field area, the crops on which might include any or all of the following grains—wheat, flax, rye, oats, barley,

and spelt. In case of total failure of the crop on such area, the company agreed to pay the face value of the policy, or \$7 per acre. In the event of partial loss, the indemnity provided for was equal to the difference between the value of the crop harvested on the field area insured and the face of the policy, it being specifically stipulated that the entire area insured in a given policy should be considered a single risk. Furthermore, the partial crop was valued at prices stipulated in the policy, namely, wheat, \$1; flax, \$1.75; rye, 70 cents; and oats, barley, and spelt, 50 cents a bushel. The insurance, therefore, even though written in terms of money, covered yield rather than returns on a monetary basis. In other words, the insured was protected in a measure against crop damage, but not against a possible drop in the prices of the crop produced. Adjustment of all partial losses was necessarily postponed until after the insured crops had been threshed.

These first attempts at general crop insurance proved rather disastrous for the companies that undertook them, owing, in part, to the severe drought that occurred in large sections of the States mentioned and, in part, to inadequate safeguards by the companies against the assumption of risks after severe damage had already taken place. The losses incurred under these contracts were to a considerable extent repudiated by the companies. Inability to settle in full was pleaded. In some cases fraud on the part of the insured was alleged and many claims were tentatively settled by the return of the premium collected. The outcome of this first attempt to provide a general crop coverage is much to be regretted.

For two years following these experiments of 1917, no general crop insurance, so far as the writer is aware, was written in the United States. During the last three years, however, the plan of offering a crop insurance contract has been revived, at least two of the larger fire insurance companies having written such contracts.

One of the policies, which was first written during 1920, in effect guarantees the farmer a specified income from each acre insured unless damage results from fire, hail, wind, tornado, failure of the seed to germinate, or failure on the part of the farmer properly to do his part in seeding, cultivating, or harvesting the crop. Losses or damage through the elements, including frost, winterkill, flood, and drought, and from insects or disease are specifically covered by the policy.

The amount of insurance per acre is based on the investment in the crop as determined by allowing a fixed amount for each process in preparing for, cultivating, and harvesting the crop in question plus an allowance for seed and for rental value of the land. Unlike the crop insurance contract first described, the policy does not place a fixed value on the grain harvested, but provides instead for a valuation on the basis of market price at the time of adjustment. The company, therefore, in effect gives protection against a drop in prices, as well as against crop damages. This feature of the policy caused the venture to prove a costly one to the company using it in 1920 because of the unexpectedly heavy drop in prices.

A crop policy even more recently devised involves a plan materially different from either of the two already described. The coverage as to hazards insured against is, however, practically the same as in the contract last outlined. In neither of these policies is the hail hazard covered. Under the plan embodied in this policy, however, the amount of insurance per acre that an applicant may receive is based on a certain percentage of his average yield during the past five years, such part of the average yield being translated into dollars by applying to it a value per bushel or other proper unit of measure based on the price prevailing during the period in question. Thus a farmer who on a given farm during the past five years has averaged 48 bushels of corn per acre may be offered insurance in an amount equal to the value of about 38 bushels at the average price for corn during the past five years. If such average price were found to be 50 cents a bushel the insurance might be placed at \$18 an acre.

One of the most important differences between this policy and either of those previously described is the plan provided for settlement of losses. In the case of total destruction of the insured crop the company agrees to pay 75 per cent of the cost of the field operations actually performed, such indemnity not to exceed 75 per cent of the total insurance carried. Furthermore, it is provided that the indemnity shall in no case exceed the cost of replacing all or any part of the quantitative returns on which the insurance is based with products of like kind and sound quality. Finally, it is provided that indemnity shall in no case exceed the amount, if any, by which the amount insured exceeds the market value of the crop harvested. Under this provision a change in price in either direction may be taken advantage of by the company.

In general, it may be said that crop insurance is still in the experimental stage and no company writing it has as yet found it profitable. In fact, from such information

as is available, it would seem that each of the few companies that have hitherto attempted this form of coverage has paid out in losses considerably more than the total premiums collected, and after a first attempt has proceeded if at all with marked deliberation and caution. The first explanation to suggest itself is that rates of premium have been too low. It is probable, however, that the explanation may in large measure be found in failure to guard against an adverse selection of risks from a physical as well as from a moral standpoint, such failure being due to lack of experience in this new field.

V. N. VALGREN,
United States Department of Agriculture.

The CHAIRMAN. I will put in the record the article on "Crop insurance," by V. N. Valgren, appearing in the Journal of Insurance and Financial Statistics, November, 1922, volume 1, No. 5, being a continuation of the article on "Crop insurance" appearing in the October, 1922, issue of the same journal.

(The continued article on "Crop insurance," by Mr. Valgren, is here printed in the record in full, as follows:)

CROP INSURANCE.

SPECIAL PROBLEMS IN CROP INSURANCE.

The determination of the amount of insurance per acre to be written is particularly important in the general plan of insurance here considered. In the ordinary insurance contract the amount of insurance placed on the various risks determines the size of the indemnity in case of loss, but does not, barring a moral hazard, affect the number of losses. Under the plan involved in each of the crop-insurance contracts hitherto written, the insurance per acre determines not only the size of the indemnities that will occur, but also the number of cases in which indemnity will be due. To insure the cornfields in a given State or locality at \$24 per acre, or the equivalent in a stipulated yield, obviously involves not only twice but many times the risk involved in insuring the same fields at \$12 per acre.

From the farmer's standpoint the chance of collecting all or a part of the second \$12 per acre would be several times the probability of collecting any part of the first \$12. The wise farmer, therefore, when he buys insurance under this plan, will buy as much per acre as the company is willing to give him. To a large extent, the company for the same reason can give justice as between good and poor land as well as between good and poor farmers in a particular locality, merely by an adjustment of the amount written per acre and without making any change in the rate of premium. This plan is not uniformly applicable, however, for the reason that climatic conditions make wide variations from the average yield much more frequent in some localities than in others.

Three relatively distinct plans of determining the amount of insurance per acre have, as above indicated, already been tried out. Under the first of these plans the insurance per acre is made an arbitrarily fixed and uniform sum. Under the second plan the maximum insurance per acre written is determined on the basis of actual investment in the crop by placing a specified value upon each operation in preparing the soil and tilling and harvesting the crop and adding to this sum a reasonable allowance for seed and rental value of the land. Under the third plan the average yield on the land in question during the past five years, coupled with the price of the product during the same period, is made the basis for determining the amount of insurance.

The first of these three methods has the advantage of extreme simplicity. Obviously, however, the unmodified plan could not be applied to a wide range of crops in different sections of the country without either greatly underinsuring some risks or overinsuring others. For general application some method of adjusting the insurance per acre to the investment involved, or the crop, is essential.

The question may then be raised: Is the investment in the crop as determined by the number and cost of the field operations performed plus seed and rental, or the average income over a period of former years as determined by yield and price, the better basis for arriving at a safe and proper amount of insurance to be written?

As between these two methods, the first may be said to be the easier to apply in so far as the agent writing the insurance is concerned. The field operations already performed or to be performed before the crop is ready for market are easily translated into terms of dollars by means of simple tables showing the cost of each operation; and the cost of seed and fertilizer, if any, as well as the commercial rental value, can no doubt be determined without much difficulty. The plan does not readily lend itself, however, to a differentiation between good farming and poor farming except

as these factors are evidenced by the number of field operations performed. In other words, unless the agent takes great personal care, the farmer who plows, disks, etc., in a slipshod manner, uses inferior seed, and exercises poor judgment in other respects, is likely to receive the same amount of insurance as the farmer who performs all field operations in a first-class manner, uses the best varieties of seed, and exercises sound judgment with reference to the time of seeding, caring for and harvesting his crops. Moreover, while the commercial rental supposedly reflects the productivity of the farm, rents are to some extent the result of established custom and do not always reflect with accuracy the productivity of a given farm.

The other method, that of average yield and price, has the disadvantage of being somewhat cumbersome and difficult to apply. The plan has the merit, however, of measuring past results in so far as it is possible to secure the facts, and these form the most reliable basis for estimating the future results which are the subject of the proposed contract.

Three different methods of determining the amount of indemnity due in case of loss have also been tried. Under the first of these it may be recalled the contract provides that in case the yield per acre valued at a price stipulated in the policy does not equal the amount of insurance per acre, the company will indemnify the insured to the amount of such difference. Under this plan it is of no financial consequence to the company whether prices go up or down. The risk involved in the price fluctuations, in so far as it affects income from yield obtained, rests entirely on the farmer.

Under a second plan, the company in effect guarantees the insured a fixed cash sum per acre, thus to a certain extent, guaranteeing not only yield, but price at the time of harvest. Under this plan those insured whose crops are damaged to such an extent as to fall short at market price of yielding the cash returns stipulated in the policy, are relieved of any anxiety of price fluctuations, this risk having been assumed by the company. Obviously, a drop in price will, however, increase the number of cases in which indemnity is due from the company, as well as the size of a given indemnity.

Under a third plan tried out by one of the companies entering this field, the contract is so drawn that the company can take advantage of a change in price in either direction. This, as already indicated, is done by a double provision to the effect that the company may either make settlement in kind on the basis of average yield used in determining the insurance per acre, or may settle the claim on a basis of dollars per acre with the crop actually harvested valued at market price. Assume, for example, that a farmer under this plan carries insurance of \$12 per acre on his wheat, this figure having been determined by taking three-fourths of a 16-bushel average yield at an average price of a dollar a bushel. Owing to one or more of the hazards insured against, the yield is reduced to 8 bushels per acre. The price at harvest time is \$1.50 per bushel. Since the value of the 8 bushels harvested is \$12, the second provision regarding basis of settlement is fully satisfied and no indemnity is due. But suppose, on the other hand, that the price following harvest is only 80 cents a bushel. The company then relies on its first-mentioned plan of settlement and offers the insured the equivalent of 4 bushels at 80 cents, or \$3.20. Had wheat remained at a dollar a bushel, the price at which the cash indemnity mentioned in the policy was arrived at, the indemnity would of course have been \$4 per acre. But with the market price at harvest standing at \$1.50 the company pays nothing and with the market price at 80 cents it pays only \$3.20.

The question may now be raised, should settlement be provided for on a basis of price stipulated in the policy, the insured rather than the company assuming the risk of price fluctuation, or should the insurance contract in effect guarantee price as well as yield; or thirdly, should the company place itself in position to take advantage of price fluctuations in either direction?

The third of these plans may doubtless be ruled out at sight as being unfair to the insured and certain to lead to dissatisfaction with the protection provided.

As between the other two plans of fixing the indemnity, it may be argued in favor of the first that since the farmer collectively considered determines the acreage planted to a given crop and hence the probable supply of the risk of price fluctuations. In favor of the plan which guarantees income rather than yield and under which the company assumes in large measure the risk of price fluctuation, it may be said that the affairs of the farmer are adjusted on the basis of an expected income. It may further be argued that the guaranteed income is properly limited to such an extent that the farmer will invariably hope and expect to exceed it, and will therefore in any case exercise his best judgment in the adjustment of his crop acreage to prospective demands. While the latter plan is undoubtedly the most desirable one

from the point of view of the farmer, it involves a particularly big undertaking for the company and must necessarily call for a higher rate of premium. If the farmer is guaranteed against crop failure, a decidedly big step has been taken even if he continues to assume the risk of fluctuation in price.

Another problem that enters into crop insurance to a peculiar extent as compared with other forms of insurance, is the seasonal nature of the business. This means that in order to secure business in any considerable quantity, competent solicitors must be employed during the summer months although the company has no employment for them after the crop season ends. Even if the same men can be used as adjusters the field work will retain its seasonal character. What is true of the field work in crop insurance is true to a considerable extent also of the office work, most of which is coincident with writing of insurance and adjustment of losses. This seasonal nature of the work necessarily tends to add to the expense of doing business.

It is also to be expected that no matter how widely the risks of a company engaged in crop insurance are distributed, the losses will vary from year to year more widely than is the case with life, fire, or other more common forms of coverage. It may be recalled from the figures given on a preceding page that the total annual crop damage measured in terms of current price has varied during a recent decade from \$2,000,000,000 to \$3,000,000,000. With such a range in crop damage when all crops in the entire United States are considered, it must, of course, be expected that the annual variation in financial loss to farmers, as well as that of total crop damage, will be materially greater if one or two crops or a more limited area are taken into consideration. Crop insurance, therefore, calls for the widest possible distribution of risks as well as liberal reserves for bad years.

FUTURE OF CROP INSURANCE.

With efforts at general crop insurance so markedly in their infancy it would seem foolhardy to attempt any definite forecast of its future development. One of the most interesting questions is the nature or form of insurance agency that will ultimately occupy this field. In rural fire insurance we have two distinct forms of agency, namely, the mutual operated at cost for the benefit of its members, and the generally larger joint-stock or old-line company operated on a commercial basis. Between these two, the field is apparently at present rather equally divided. The 2,000 mutuals, mostly local farmers' mutuals, carry a total insurance on farm property of approximately \$7,000,000,000. While this insurance provides two-thirds to three-fourths coverage for somewhat less than half the insurable farm fire risks, much farm property is as yet uninsured against fire. It is probable, therefore, that the total farm fire risks carried by old-line companies falls somewhat short of the total carried by the mutuals.

In the field of specific insurance against hail damage to growing crops the business is divided between three groups or classes of agencies, namely, the old-line companies, which carry approximately one-half of the total; mutual insurance companies, which carry about one-fourth, and State hail insurance departments in the two Dakotas, Montana, and Nebraska, which carry the other fourth. Will the field of crop insurance be left to be developed by old-line companies exclusively; will one or more of the nation-wide farmers' organizations bring about the organization of a mutual insurance company to provide crop insurance for the members; or will the State or Federal Governments be prevailed upon to enter this field?

Several bills and resolutions have been introduced in Congress providing either definitely for a crop-insurance bureau to be administered by one of the Government departments, or for an investigation of the question with a view to suggesting later action by Congress of one kind or another. Shortly before the adjournment of the recent session of Congress the Senate by resolution introduced by Senator McNary, of Oregon, provided for the appointment of a committee of three Senators to investigate the subject of crop insurance and report its findings to Congress. Should crop-insurance facilities based on private enterprise long be delayed, it seems probable that considerable pressure for Government action will be brought to bear.

About all that can be said with confidence is that the need for adequate insurance protection for the growers of crops is strikingly evident. Each year sees large numbers of farmers either economically crippled or financially ruined by reason of the risks assumed by them in their business of crop production. While instances of this kind are most numerous in certain regions of the western half of the United States where rainfall is peculiarly unreliable and generally deficient for best results, they are by no means uncommon in any State of the Union. In view of the need for means of protection and the fact that other necessary enterprises involving serious risks are already supplied with such means, it seems inexcusable as well as highly improbable,

in spite of the difficulties involved, that adequate crop-insurance facilities should long remain undeveloped.

V. N. VALGREEN,
United States Department of Agriculture.

The CHAIRMAN. There is another article that I desire to place in the record, by Theo. H. Price, editor of Commerce and Finance, published in the Journal of Insurance and Financial Statistics, dated December, 1922, volume 1, No. 6.
(The article referred to is here printed in the record in full, as follows:)

CROP INSURANCE—IS IT FEASIBLE?

In my study of the agricultural problem that we are asked to consider I find myself asking whether a partial solution of it is not to be had by a resort to crop insurance. I submit the suggestion in the form of a question rather than as a recommendation, because it is plain that much thought and investigation will be required to determine whether the hazards of agriculture are insurable. During the last two centuries the principle of insurance has been greatly extended in its application. The first "underwriters" were the merchants who wrote their names under an agreement to share the marine risks and losses to which the ships and cargoes of their fellow merchants were subject.

The business of fire insurance was next developed.

Then, as the law of probabilities became better understood, life insurance began to be written and the business has grown until in the United States alone there are 40,000,000 policyholders in life insurance companies or associations whose resources are in excess of \$7,000,000,000. No one will deny the benefits of life insurance.

After life insurance came accident insurance and credit insurance, and now we can insure against losses caused by burglary, defalcation, rain, snow, hail, and tornado, as well as against war, unemployment, old age, strikes, and many other ills or accidents of life. It is said that at Lloyds in London policies have been written that called for the payment of a "total loss" to parents to whom twins were born, and just before the Disarmament Congress met in Washington the New York Times reported that 15 per cent was paid at Lloyds to insure that the British West Indies would not be surrendered to the United States by or before December 31, 1922, in full or partial payment of Great Britain's debt to this country.

CROP FAILURES CAUSE NATIONAL CRISES.

From a very remarkable essay upon "War and insurance," written by the late Prof. Josiah Royce, of Harvard, just after the outbreak of the World War in 1914, I quote the following passages:

"Experience shows that the insurance principle comes to be more and more used and useful in modern affairs. Not only does it serve the ends of individuals, or of special groups of individuals. It tends more and more both to pervade and to transform our modern social order. It beings into new synthetics not merely pure and applied science, but private and public interests, individual prudence, and a large regard for the general welfare, thrift, and charity. It discourages recklessness and gambling. It contributes to the sense of stability. It quiets fears and encourages faithfulness.

"Floods, famines, pestilences, earthquakes, and volcanoes may interfere, in various fashions, with the economic as well as with the rest of the social life of the peoples thus afflicted. Apart from actual famines, the considerable failure of their crops may impair, for a season, the normal supplies of individual nations. Internal crises, social and political, may interrupt their healthy development in ways involving not only moral disasters, but heavy expenses. Such evils come upon various nations with irregularly recurrent but also with widely different weight and seriousness. Only a vast and long continued collection and an exceedingly difficult statistical analysis of the facts regarding such calamities could determine the regularities which a sufficiently large number of instances of national disaster would be, if properly studied, certain to show. Such regularities, however, if once discovered, would furnish an 'actuarial basis' upon which an insurance of individual nations against such risks could conceivably be undertaken." And in the eleventh edition of the Encyclopedia Britannica, in the article upon "Insurance" written by Charlton Thomas Lewis, Ph. D., a great authority upon the subject, I find these words:

"The value of insurance as an institution can not be measured by figures. No direct balance sheet of profit and loss can exhibit its utility. The insurance contract produces no wealth. It represents only expenditure. If a thousand men

insure themselves against any contingency, then, whether or not the dreaded event occurs to any, they will in the aggregate be poorer, as the direct result, by the exact cost of the machinery for effecting it.

"The distribution of property is changed, its sum is not increased. But the results in the social economy, the substitution of reasonable foresight and confidence for apprehension and the sense of hazard, the large elimination of chance from business and conduct have a supreme value. The direct contribution of insurance to civilization is made not in visible wealth but in the intangible and immeasurable forces of character on which civilization itself is founded. It is preeminently a modern institution. Some two centuries ago it had begun to influence centers of trade, but the mass of civilized men had no conception of its meaning. Its general application and popular acceptance began within the first half of the nineteenth century and its commercial and social importance have multiplied a hundredfold within living memory. It has done more than all gifts of impulsive charity to foster a sense of human brotherhood and of common interests. It has done more than all repressive legislation to destroy the gambling spirit. It is impossible to conceive of our civilization in its full vigor and progressive power without this principle, which unites the fundamental law of practical economy, that he best serves humanity who best serves himself, with the golden rule of religion, 'Bear ye one another's burdens.'"

INSURANCE THE TRUE SOCIALISM.

It might almost be said that if insurance were universal and included all the hazards of life it would be a practicable form of socialism, for it distributes the losses of the few among the many without diminishing the incentive to individual effort. But the question is, Can it be applied to the hazards of agriculture and would the Government be justified in undertaking it? We all know that one of the farmer's greatest difficulties is that he is compelled to be a speculator and to take risks that are not calculable. He is in fact a gambler against his will, for gambling is defined as hazard without calculation in contradistinction to speculation, which is hazard with calculation. The farmer must cultivate his land or see it go to waste. He has to plant some crops, such as winter wheat in the autumn and others in the spring, but he can not have any assurance of the prices that will be obtainable for them 6 or 10 months later. He is, moreover, exposed to the hazards of the weather and innumerable agricultural pests in the interval.

The merchant who is not reasonably certain that he can sell goods will not buy them or will reduce his inventories, and the manufacturer who is not assured of a profitable market for his product will shut down his factory and let his labor remain idle. But the farmer can not follow these examples. He has to plant his land at planting time or allow his investment to remain idle and deteriorate for a year.

If he decides to plant, he will probably become a borrower on obligations that mature concurrently with his crop. The whole financial system of the Northern Hemisphere is organized upon a plan which contemplates an autumnal liquidation of agricultural debts. Within one or two months the farmer is compelled to sell the crops that represent the labor of the year just ended and the world's consumption for another year just commencing. The result is congestion and a buyer's market in which the seller is at a great disadvantage.

What is the remedy? Surely there must be one. If it is to be found in crop insurance it should be speedily applied.

CROP INSURANCE NOT A NOVELTY.

Crop insurance is not a new idea. At least two joint-stock fire insurance companies and several mutuals have tried it, but they had no experience upon which to base their rates, and found that in order to get a fair average they would have to blindly accept risks so large that their capital might be jeopardized. Even to those who know but little about the science of underwriting it is plain that a very large number of widely scattered crops would have to be insured before the probable percentage of loss could be ascertained.

A rate so high that it would absolutely protect the insurer would be regarded as extortionate and no one would take out a policy, while a rate that was too low might bankrupt the underwriter if he did a large business or had many risks in one locality.

Then there is the question of determining or measuring the farmer's loss. Manifestly it would be unwise to allow him to insure his crop for any valuation he chose to put upon it. An overvaluation would be an incentive to neglect and extravagance and would lead to the presentation of many unfair or fictitious claims. On the other hand, an undervaluation would not give the protection required.

In so far as any rule has been applied by those companies who have written crop insurance the practice seems to have been to insure the actual cost of production up to a certain maximum per acre and to require that the farmer insured must furnish satisfactory proof that the amount claimed has been actually expended.

In some cases crop policies have also contained a provision making the farmer a "coinsurer" for 20 per cent of the risk so that he would have an additional incentive to avoid loss. The price of the crop insured at planting time is another factor that must be taken into consideration if the indemnity provided is to cover a possible deficiency between the proceeds finally realized at harvest time and the ascertained cost of production.

It seems reasonable to assume that if prices were low when the crop was being sown the risk would be less than if prices were high. The cost of production would be smaller and the chance of an advance in values that would offset crop failure would be greater. As a generalization therefore we may conclude that rates ought to have a direct relation to the prevailing values for agricultural products when the policies were written. But in its other aspects the problem is not so simple.

FARM SURVEY PRACTICABLE.

The cost of producing a crop varies in different regions or on different lands. In the Atlantic States fertilizer is required to produce a good cotton crop. In Texas fertilizer is not used. The cost of labor also varies in different sections.

These are factors that would have to be taken into consideration in determining the insurable maximum of production costs.

It might be necessary to have each insured farm surveyed in order to fix rates and insurable values fairly. This would seem to involve an appalling amount of detail, but does it? Every building in almost every city and town of the United States has been surveyed in the interest of the fire insurance companies.

In most fire insurance offices there are to be found huge books of maps on which the area, height, construction, fire exposure and hazards of every building in every city of the United States and Canada are accurately set forth. These maps are kept up to date by the company which issues them. The corrections are made by pasting the maps of new buildings over those which have been demolished.

According to the last census there are 6,448,336 farms in the United States. The number of buildings in our cities is not known, but New York City alone has over 600,000, and the total in all cities is probably well over 6,000,000. If they can be mapped as they are, the feat of surveying the farms would not seem so difficult and the information in regard to soil, area and productivity thus made available would be invaluable.

With it as a basis, equitable rates for writing crop insurance could be speedily established and with a crop insurance policy added to the other security that a farmer can offer his financial problem would be much simplified.

The general use of crop insurance would benefit the farmer and the country in many other ways upon which it is not now necessary to elaborate. The fact that the farmer could, if he chose to, protect himself against the great risks and ruinous losses to which he is now exposed is a sufficient reason for considering whether the Government ought not to provide the machinery and credit requisite if crop insurance on a large scale is to be made immediately available.

Most people are wisely opposed to having the Government enter any business that its citizens can handle, but here is a business that private capital can not undertake because of its novelty and magnitude. Would it not therefore be well for the President or Congress to immediately appoint a committee to make a careful study of the subject with a view of ascertaining whether it would be practicable and expedient for the Government to establish a crop insurance bureau from which the farmer could buy policies that would indemnify him for his actual and reasonable expenditure and from which after a few years the larger insurance companies who were willing to do the business could obtain data upon which to base rates?

WAR RISK INSURANCE PROFIT \$17,000,000.

Shortly after the outbreak of the war on the 1st of August, 1914, the British Government undertook to insure the marine war risks to which vessels and cargoes under its flag were subject. Almost concurrently the then Secretary of the Treasury, Mr. Wm. G. McAdoo, asked Congress for authority to organize an American War Risk Insurance Bureau for insuring hulls and cargoes under the American flag. The necessary legislation providing an initial fund of \$5,000,000 was passed. The bureau was organized and was functioning by the 2d of September, 1914. It continued in existence until the end of the war. Its record is remarkable.

The total of the policies issued was \$2,250,000,000. The premiums received amounted to \$16,000,000, and the losses paid were \$29,000,000, leaving a profit of \$17,000,000. The expense of conducting this enormous business for the four years was only \$165,000, or hardly more than one-third of 1 per cent upon the premiums received. When compared with the cost of conducting the insurance business under private auspices these figures seem to be almost incredible and they are an effective refutation of the frequently repeated assertion that Government management is always inefficient and extravagant.

It is, however, only fair to say that the bureau had the advantage of being able to commandeer the services of some of the ablest underwriters in America. Its director was William C. De Lanoy and its advisory board consisted of Hendon Chubb, William N. Davey, and William R. Hedge. For little or nothing these men gave their time to the work as a war duty, and while the great success of the bureau was largely due to the authority and credit of the Government, it would be uncandid not to recognize the share that those named and many others had in the results achieved. As the business grew Congress appropriated a further \$45,000,000 as additional working capital for the bureau, but not a dollar of the total of \$50,000,000 put at its disposal was ever drawn, as almost from the first the premiums received exceeded the losses and expenses incurred.

I have been unable to obtain exact information with regard to the insurance business conducted by the British Government, but those who are "in the know" believe that it was also highly profitable and it is generally admitted that both the American and the British bureaus rendered a very substantial and necessary service to the shipping and trade of the respective nations.

IF SHIPS, WHY NOT CROPS?

In an article published in the New York Times of Monday, December 26, 1921, advocating a ship subsidy, there is included a proposal that "the Government should create a nonprofit-making corporation to insure its own ships and to offer hull insurance at cost to privately owned American vessels." It is explained that "for the organization of a nonprofit-making insurance corporation a \$10,000,000 loan will be necessary" and that the cost of handling cargo insurance is estimated at about \$1,000,000 for the first year and a decreasing amount each year thereafter, the loss ultimately vanishing.

If the Government is willing to do this for shipping, it ought not to hesitate in doing at least as much if not more for our infinitely more important agricultural industry, and I earnestly recommend the idea to its consideration.

The difficulties that seem so great in prospect would, I believe, disappear in practice, and it is highly probable that after the first year or two the business would show a profit and produce an income that would more than pay the cost of conducting it.

THEO. H. PRICE,
Editor of Commerce and Finance.

The CHAIRMAN. The committee will stand adjourned until the call of the chairman some time in the fall or early winter.

(Thereupon, at 3.30 p. m., Friday, April 27, 1923, the hearing was adjourned subject to the call of the chairman.)

**END OF
TITLE**